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ALASKA
Department of
Environmental
Conservation

VAPOR INTRUSION ASSESSMENT
4TH AND GAMBELL SITE

FINAL
August 2009

Prepared by:

oasis
ENVIRONMENTAL

825 W. 8th Ave.
Anchorage, AK 99501

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ACRONYMS AND ABBREVIATIONS

ADEC.....Alaska Department of Environmental Conservation
bgs.....Below ground surface
DCE.....Dichloroethene
DO.....Dissolved oxygen
DRO.....Diesel range organics
EPA.....United States Environmental Protection Agency
ESA.....Environmental site assessment
GCL.....Groundwater cleanup level
GRO.....Gasoline range organics
IDW.....Investigation-derived waste
inHg.....Inches of mercury
µg/m^3.....Micrograms per cubic meter
µg/kg.....Micrograms per kilogram
mg/L.....Milligrams per liter
mL/min.....Milliliter per minute
NC.....Northern Commercial
NTP.....Notice to Proceed
OASIS.....OASIS Environmental, Inc.
PCE.....Tetrachloroethene
ppb.....Parts per billion
ppm.....Parts per million
SCL.....Soil cleanup level
SMD.....Submembrane depressurization
TCE.....Trichloroethene
UST.....Underground storage tank
VOC.....Volatile organic compound

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EXECUTIVE SUMMARY

OASIS Environmental, Inc. conducted vapor intrusion assessments at four residences located north of the 4th and Gambell site on behalf of the Alaska Department of Environmental Conservation (ADEC). The assessments included the installation of four permanent soil gas monitoring points outside each residence in February 2009. Air sampling occurred in March and June 2009. An indoor air, outdoor air, and soil gas sample were collected at each of the two western residences located at 710 E 3rd Avenue and 720 E 3rd Avenue. A crawl space air, outdoor air, and soil gas sample were collected at each of the two eastern residences, which are both duplexes located at 736 E 3rd Avenue. A building survey also was conducted at the two eastern residences prior to the March 2009 sampling event. No building surveys were conducted at the duplexes because indoor air samples were not collected.

Analytical results from the two assessments indicate that tetrachloroethene (PCE), the main contaminant of concern at the site, was present in soil gas at concentrations exceeding ADEC target soil gas levels at all four residences for both sampling events. In addition, indoor air or crawl space analytical results show that PCE also was present above ADEC indoor air target levels at all four residences for both sample events, except for the south duplex in June 2009. These findings indicate that PCE is present in the residences above risk-based screening levels likely as a result of vapor intrusion. No other compound was found to be present in the residences above indoor air target levels as a result of vapor intrusion.

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1. INTRODUCTION

Under Notice-to-Proceed (NTP) 18-9028-13-52, the Alaska Department of Environmental Conservation (ADEC) tasked OASIS Environmental, Inc. (OASIS) with evaluating the vapor intrusion pathway at several residential buildings located north of the 4th and Gambell site (hereafter, "the site") in Anchorage, Alaska. The site is located on the northeast corner of the 4th Avenue and Gambell Street intersection (Figure 1). This report summarizes the results of sampling efforts in March and June 2009.

1.1. Objective

The objective for this project, based on the project plan outlined in *Vapor Intrusion Assessment, Work Plan, 4th and Gambell* (OASIS 2009), is to determine the potential for vapor intrusion at four buildings located north of the site.

1.2. Project Organization

ADEC contracted OASIS to manage and execute this project under NTP 18-9028-13-52. OASIS subcontracted with GeoTek Alaska, of Anchorage, Alaska, to install soil gas monitoring points, and with Air Toxics Ltd, of Folsom, California, to perform analysis of air samples.

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2. BACKGROUND

This section summarizes the environmental setting and previous investigations at the 4th and Gambell site. The environmental setting is based on information from existing investigation reports. Section 8 lists all referenced materials.

2.1. Environmental Setting

The following paragraph on the environmental setting at the site is taken from *Environmental Assessment* (EnviroAmerica 1993):

> Local site conditions may consist of alluvium in abandoned stream channels and in terraces along modern streams. Gravel and sand appears to be generally well bedded and well sorted. Deposits in large channels and in other broad areas are chiefly gravel and thicker than deposits in small narrow channels and terraces, which contain chiefly sand and gravel; some channels and broad areas may contain significant amounts of peat, silt or clay.

Drilling logs from soil borings installed at the site indicate that vadose-zone soils are fine- to coarse-grained sands and gravel. The water table is located approximately 40 feet below ground surface (bgs), although the saturated zone appears to vary by as much as 5 feet. The groundwater flow direction has been mapped to the northeast. A layer of clay exists around 45 feet bgs and may serve as a confining layer for migration of contaminants (BGES 2005).

2.2. Previous Investigations

A Phase I environmental site assessment (ESA) was performed for the site in 1993. The Phase I ESA identified the operation of a C&K Cleaners from 1968 to 1970 and a Northern Commercial (NC) Tire Center from 1976 to 1978. C&K Cleaners appears to have been located on the western side of the property, and NC Tire Center appears to have been located on the eastern side of the property. The Phase I site reconnaissance indicated that an underground storage tank (UST) vent pipe was visible on the property. All buildings were removed from the site in 1978. The site has since served as a parking lot (EnviroAmerica 1993).

A Phase II ESA was performed in 1997. Trenches dug near the former C&K Cleaners unearthed a log crib with four empty drums marked for use in dry cleaning. A soil sample collected near the drums had a concentration of tetrachloroethene (PCE) of 3.2 parts per million (ppm). Seven hydraulic lifts, associated piping, sumps, an UST, and a log crib also were identified near the former NC Tire Center. Soil samples collected near the log crib had concentrations of PCE, ethylbenzene, toluene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, arsenic, barium, cadmium, and chromium above ADEC soil cleanup levels (SCLs). Three monitoring wells (MW-1, EPM-2, and EPM-3) also were installed. No volatile organic compounds (VOCs) were detected in MW-2 and MW-3. The concentration of PCE in MW-1 was 4.25 ppm (EPMI 1997).

Another Phase II ESA was performed in August 2004, which included excavation of six test pits, removal of five hydraulic lifts, removal of four USTs, removal of soil contaminated with diesel range organics (DRO) above the SCL, and identification of monitoring well MW-1. The hydraulic lifts and USTs were associated with the former NC Tire Center operation. The contaminated soil came from underneath the hydraulic lifts and USTs. Concentrations of PCE above the SCL were detected in three of the test pits. These three test pits were located on the western side of the property near the location of the former cleaners (BGES 2004a).

Monitoring well MW-1 was sampled in October 2004. The sample was analyzed for VOCs by United States Environmental Protection Agency (EPA) method 8260. The concentration of PCE was 2.28 milligrams per liter (mg/L), which exceeds the ADEC groundwater cleanup level (GCL) of 0.005 mg/L. All other compounds were less than laboratory reporting limits (BGES 2004b).

Three additional monitoring wells (MW-2, MW-3, and MW-4) were installed in March 2005. Soil samples were collected during drilling from various intervals and analyzed for VOCs. Concentrations of PCE ranged from 2,130 micrograms per kilogram (µg/kg) in the interval from 36 to 38 feet bgs in MW-4 to 79,500 µg/kg in the interval from 28 to 30 feet bgs in MW-2. All other compounds were less than laboratory reporting limits. PCE results for groundwater were 1.49 mg/L in MW-1, 0.0707 mg/L in MW-2, 1.79 mg/L in MW-3, and 0.372 mg/L in MW-4. All other compounds in groundwater were less than laboratory reporting limits. The conclusion was made that biodegradation of PCE was not occurring at a significant rate because of a lack of PCE daughter compounds and the oxygenated state of the aquifer (BGES 2005). However, it should be pointed out that dissolved oxygen (DO) was measured at ground surface in purge water obtained by the use of a bailer, which generally does not provide a representative measurement for DO.

Five soil borings (A, C, D, E, and F) were drilled and three monitoring wells (MW-5, MW-6, and MW-7) were installed in an assessment performed in 2007. Soil samples were collected from two or three intervals in all eight borings. Concentrations of PCE exceeded the SCL in all samples. Concentrations of PCE in groundwater exceeded the GCL of 0.005 mg/L in all three wells: 0.523 mg/L in MW-5, 0.822 mg/L in MW-6, and 0.0051 mg/L in MW-7 (BGES 2007).

A site characterization was performed in July 2008. The site characterization included drilling and sampling six soil borings (SB-1, SB-2, SB-3, SB-4, SB-5, and SB-6), sampling monitoring wells MW-5 and MW-6, and sampling two temporary wells (SB-1 and SB-2). Analytical results for soil borings SB-2, SB-3, SB-4, and SB-5 indicate an area of PCE-impacted soil that is located north and northeast of the former C&K Cleaners. Contamination is present at ground surface in the areas of SB-2, SB-3, and SB-4, but the significant mass of contamination occurs in a gravelly sand profile that begins around 15 feet bgs and extends to approximately 35 feet bgs. Analytical results from groundwater samples collected at the monitoring and temporary wells during this site characterization demonstrate that PCE exceeds the GCL underneath the entire area of the former C&K Cleaners. The plume appears to extend northeastward, which is the

reported direction of local groundwater flow. Based on the elevated PCE concentration in MW-2 and MW-6, the plume likely extends west of Gambell Street and north of 3rd Avenue, respectively. The absence of PCE or other significant concentrations of VOCs in temporary well SB-1 indicates that no upgradient source is contributing to contamination at the 4th and Gambell site (OASIS 2008).

Figure 2 shows the locations of soil borings and monitoring wells discussed in this section.

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3. REGULATORY FRAMEWORK

A regulatory framework for this project has been developed using the following regulations and guidance documents:

- EPA, *OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance)*, November 2002
- Interstate Technology Regulatory Council, *Vapor Intrusion Pathway: A Practical Guideline*, January 2007
- California Environmental Protection Agency, Advisory–Active Soil Gas Investigations, January 28, 2003

3.1. Contaminants of Concern

The contaminants of concern have been identified from a review of previous investigations (EPMI 1997, BGES 2004a, BGES 2004b, BGES 2005, and BGES 2007). The list includes the following volatile contaminants:

- PCE and its daughter compounds trichloroethene (TCE), cis-1,2-dichloroethene (DCE), trans-1,2-DCE, and vinyl chloride
- Petroleum hydrocarbons–benzene, toluene, ethylbenzene, xylenes, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, gasoline range organics (GRO), and DRO

3.2. Screening Levels

A multiple-lines-of-evidence approach involving analytical data from outdoor air samples, indoor air samples, soil gas samples, weather conditions, and results of building surveys is used to evaluate the vapor intrusion pathway. If analysis of the lines-of-evidence indicates that indoor air concentrations appear to be the result of vapor intrusion, then indoor air analytical results are compared to ADEC indoor air target levels as presented in *Draft Vapor Intrusion Guidance at Contaminated Sites, July 2009,* to evaluate risk from vapor intrusion. The indoor air target levels represent an incremental cancer risk of 1 in 100,000 from chronic exposure to carcinogenic contaminants in indoor air or a hazard quotient of 1.0 for non-carcinogenic contaminants. Table 1 summarizes the ADEC screening levels for contaminants of concern as well as screening levels for soil gas concentrations.

TABLE 1. SCREENING LEVELS FOR CONTAMINANTS OF CONCERN, 4TH AND GAMBELL, ANCHORAGE, ALASKA

Compound	ADEC Residential Soil Gas Target Levels ($\mu g/m^3$)	ADEC Residential Indoor Air Target Levels ($\mu g/m^3$)
PCE	41	4.1
TCE	2.2	0.22
cis-1,2-DCE	370	37
trans-1,2-DCE	630	63
Vinyl chloride	8.1	0.81
Benzene	31	3.1
Toluene	52,100	5,200
Ethylbenzene	220	22
Xylenes	1,000	100
1,2,4-trimethylbenzene	73	7.3
1,3,5-trimethylbenzene	73	7.3
GRO	---	---
DRO	---	---

Note: $\mu g/m^3$ = Micrograms per cubic meter

4. FIELD ACTIVITIES

This section presents a summary of field activities associated with vapor intrusion assessments performed at four residential buildings in March and June 2009. The four buildings are the following:

- Single family residence located at 710 3rd Avenue
- Single family residence located at 720 3rd Avenue
- North duplex located at 736 3rd Avenue
- South duplex located at 736 3rd Avenue

A suite of soil gas samples, indoor air samples, and outdoor air samples was collected at the two single family residences, while a suite of soil gas samples, crawl space samples, and outdoor air samples was collected at the duplexes. This section is divided into subsections that address sampling activities by sample type. Appendix A contains a copy of field notes, and Appendix B presents photographs depicting field activities.

4.1. Building Surveys

OASIS field personnel conducted a building survey and inventory for the two single family residences since these were the only buildings where indoor air samples were collected. Appendix C contains a copy of the surveys. The following observations were made for each residence:

- 710 3rd Avenue – Split-level home with the bottom floor about 5 feet below grade. The upstairs is the main living space with a kitchen, living room, bathroom, and bedroom. Half of the downstairs is finished as living area; the other half is the laundry room and an unfinished area. The unfinished area has a floor drain. The house is heated by a hot-air furnace located in the basement that is fueled by natural gas. Cleaners and detergents are regularly used in the building and most of them are stored under the kitchen sink and in the laundry room. No products containing chlorinated organic solvents were observed, and no products were removed from the building prior to sampling. Background volatile organic concentrations in the residence were around 200 parts per billion (ppb).
- 720 3rd Avenue – Split level home with the bottom floor about 5 feet below grade. The upstairs is the main living space with a kitchen, a living room, a bathroom, and two bedrooms. The downstairs is completely finished with two bedrooms, a kitchen, and a workshop. The kitchen has a floor drain. The house is heated by electric space heaters. Cleaners and detergents are regularly used in the building and most of them are stored in the kitchen areas. The work shop had numerous products, mostly oils and lubricants, but no products containing chlorinated organic solvents were observed; therefore, no products were removed from the building prior to sampling. Background volatile organic concentrations in the upstairs were around 1,300 ppb, and background volatile organic concentrations in the downstairs were around 2,000 ppb.

While building surveys were not conducted at the two duplexes, OASIS did observe and document the submembrane depressurization (SMD) system that was installed at the north duplex by the property owner after the March sampling event. Figure 3 shows a diagram of the SMD system, which was operational during the June 2009 sample event.

The SMD system is intended to extract vapors from the crawl space and vent them to outside air prior to their reaching the building living space. The crawl space in the northern duplex is approximately 40% concrete slab and 60% fill material. The system is constructed using a radon mitigation blower with a maximum flow rate of 180 cubic feet per minute. The blower is connected to 50 feet of 4 inch diameter perforated PVC piping laid in a north/south orientation along the length of the building. The piping is covered by 6 mil plastic sheeting. The plastic sheeting extends across the entire area of the building that is not covered by a concrete slab and is draped along the concrete block perimeter walls. The seams between sheets of plastic are overlapped, sealed together using silicone caulk, then taped using clear packing tape. Additionally, the plastic sheeting along the perimeter walls is sealed to the top of the concrete block wall using silicone caulk. The plastic sheeting is also taped in places where it adjoins an obstruction such as a post or one of the building's two furnace units.

The blower is a high volume, low vacuum unit. Although the piping is located only along the eastern half of the crawl space, the plastic sheeting is intended to increase the radius of influence of the blower. The crawl space has no additional outside air vents which also helps to concentrate the air flow to the area beneath the plastic sheeting. The blower will provide approximately 33 complete air exchanges of the crawl space in a 24 hour period under peak flow conditions.

4.2. Sample Locations

OASIS field personnel selected locations to collect air samples based on project objectives, building surveys, and distance from underground utilities. The following locations were selected by sample type:

- Soil Gas – One soil gas monitoring point was installed outside each building. The points were located so as to be near documented soil contamination and clear of underground utilities.
- Crawl Space – CS-1 is located in the crawl space of the north duplex; CS-2 is located in the crawl space of the south duplex.
- Indoor – IA-1 is located in the living room of the residence at 710 3rd Avenue; IA-2 is located in the living room at 720 3rd Avenue.
- Outdoor – AA-1 is located on the east side of the residence at 710 3rd Avenue, on the southwest side of the school; and AA-2 is located between the duplexes.

Figure 4 shows the locations of the samples.

4.3. Air Sampling

OASIS field personnel and GeoTek Alaska installed soil gas monitoring points on February 18, 2009. The March 2009 sampling event commenced on March 2 and ended on March 4. The June 2009 sampling event commenced on June 12 and ended on June 13. Weather conditions were monitored during sampling using a portable electronic weather station. The following subsections detail the procedures for air sampling. Table 2 presents a summary of sample information.

4.3.1. Outdoor, Indoor, and Crawl Space Air Samples

Outdoor, indoor, and crawl space air samples were collected in 6-liter, 100%-certified summa canisters with 24-hour flow controllers. The canisters for the indoor and outdoor air samples were elevated between 3 and 5 feet above the ground to capture the breathing zone for a seated individual. The canisters for the crawl space air samples were placed on the ground surface in the crawl space.

OASIS field personnel measured the initial vacuums in the canisters prior to sample collection to ensure adequate beginning vacuum. OASIS field personnel also measured the final vacuums in the canisters after 24 hours of sample collection.

4.3.2. Soil Gas Samples

The sub-slab monitoring points were installed using a direct-push drill rig. Each monitoring point was drilled to 6 feet bgs. A stainless steel, 6-inch soil gas implant was centered vertically within 2 feet of 10/20 silica sand at the base of each boring. Dedicated Teflon sample tubing that extended from the implant to the ground surface was connected to each implant. A combination of granular bentonite and hydrated bentonite slurry was used to seal the soil gas implants from the ground surface. Figure 5 shows the construction of a typical soil gas monitoring point. The soil gas monitoring points were completed with a flush-mount monument to allow for future sampling of each point.

The process for sampling the soil gas monitoring points began with a leak check of the monitoring point and sample manifold. The leak check was comprised of are two parts: a manifold check and a soil gas monitoring point check. The following procedure was used for conducting the manifold leak check:

- Measured the initial vacuum in the summa canister.
- Connected the entire sample train. This entailed attaching a piece of Teflon sample tubing to the sub-slab monitoring point and the other end to the monitoring point valve on the inside of the leak detection hood. Another piece of Teflon sample tubing was then connected to the monitoring point valve on the outside of the leak detection hood and the other end to the manifold. Then, the helium supply was connected to the leak detection hood; the pump was connected to the pump valve on the manifold; and the rotameter was connected to the other side of the pump. Lastly, a 30-minute flow controller and 1-liter summa canister were connected to each other, and the other end of the flow

controller was connected to the sample valve on the manifold. Figure 6 shows a schematic of the leak detection system.

- Closed the monitoring point valve on the leak detection hood and opened the sample and pump valves. Ran the sample pump so that a vacuum is pulled on the manifold.
- Closed the pump valve and turned off the pump. Verified that the manifold maintained a constant vacuum.

At this point, the leak check for the soil gas monitoring point was performed. The following process was used for the soil gas monitoring point leak check:

- Opened the monitoring point and pump valves and turned on the sample pump. Verified that the flow rate was 200 milliliter per minute (mL/min) using the rotameter.
- Allowed helium to flood the leak detection hood for approximately one minute. Measured the helium concentration in the leak detection hood by sampling the exhaust port on the leak detection hood.
- Purged 2 liters of soil gas (ten minutes of purging). During purging, connected a tedlar bag to the exhaust line of the rotameter to collect a sample of the purge air. At the completion of the purge, analyzed the helium concentration of the air in the tedlar bag using a helium detector. A reading of less than 10% of the helium concentration measured in the leak detection hood was considered a successful leak check.
- Measured oxygen, carbon dioxide, and volatile compound readings from the tedlar bag using a multi-gas meter.

At this point, the soil gas sample was collected. The following process occurred:

- Closed the pump valve on the manifold, turned off the pump, and verified that the sample valve was open on the manifold.
- Opened the valve on the summa canister and allowed the canister to fill for 30 minutes.
- Closed the valve on the summa canister at the end of 30 minutes, disconnected the flow controller from the summa canister, and measured the final vacuum in the canister.

4.4. Work Plan Deviations

OASIS prepared *Vapor Intrusion Assessment, Work Plan, 4th and Gambell* (OASIS 2009), which outlined the strategy and methodology for the evaluation of the vapor intrusion pathway. The fieldwork was executed as per the plan except for the following deviation:

- The samples for each sample event were supposed to be collected simultaneously so that all sample times overlapped; however, the deployment of the indoor air sample for location IA-2 in March 2009 at 720 3rd Avenue was not

deployed with the other samples because of a scheduling misunderstanding with the homeowner. The sample at IA-2 was collected a day after all other samples had been collected. The impact to data quality and objectives from this deviation is expected to be minimal.

4.5. Investigation-Derived Waste

Field activities for the vapor intrusion assessment generated minimal investigation-derived waste (IDW). Solid IDW included used personal protective equipment, sampling equipment, and approximately 3 gallons of soil cuttings from the installation of the soil gas monitoring points. No aqueous IDW was generated. The used personal protective equipment and sampling equipment was bagged and disposed of at the Anchorage landfill. OASIS collected a sample of the soil cuttings for analysis of VOCs by the toxicity characteristic leaching procedure. The results were non-detect for all compounds. The soil cuttings were spread at the site near monitoring well MW-6.

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5. RESULTS

This section discusses field observations and analytical results of the vapor intrusion assessment. It is divided into subsections based on the two sample events. Results are discussed by building. Appendix D contains a copy of the laboratory analytical reports.

5.1. March 2009

Samples were collected from March 2 to 4, 2009. The barometric pressure generally was increasing during the hours of sampling at the two single family residences, but pressure was decreasing during the hours of sampling at the duplexes. The readings began at 29.80 inches of mercury (inHg) and ended at 29.94 inHg. The minimum pressure was 29.74 inHg, and the maximum was 30.03 inHg (see Figure 7). Temperatures ranged from 2.2 degrees Fahrenheit to 19.9 degrees Fahrenheit. There were clear skies at the beginning of sampling, which gave way to overcast skies and snow showers.

5.1.1. 710 3rd Avenue

Table 3 presents analytical results for air samples collected in March 2009 at 710 3rd Avenue. Figure 8 displays a subset of analytical results.

Only two compounds were detected in the soil gas sample from SG-1: PCE and tetrahydrofuran. The concentration of PCE exceeded the ADEC soil gas target level, while tetrahydrofuran does not have a soil gas target level.

Eleven compounds were detected in the indoor air sample from the residence, while PCE, benzene, and 1,4-dichlorobenzene exceeded their respective indoor air target levels. PCE was not detected in the outdoor air sample, so there appears to be no ambient source of the compound. Since benzene and 1,4-dichlorobenzene were not detected in the soil gas sample, it is assumed that there are background sources of these compounds in the residence.

Given that PCE was detected in both the soil gas and indoor air samples, the evidence suggests that PCE is present in the residence at least partially because of vapor intrusion. At the time of sampling, the indoor air concentration was less than the indoor air target level. The potential for some background source of PCE in the residence remains a possibility without sub-slab analytical data.

5.1.2. 720 3rd Avenue

Table 4 presents analytical results for air samples collected in March 2009 at 720 3rd Avenue. Figure 8 displays a subset of analytical results.

Three compounds were detected in the soil gas sample from SG-2: PCE, Freon 12, and tetrahydrofuran. The concentration of PCE exceeded the ADEC soil gas target level by two orders of magnitude. On the other hand, Freon 12 had a soil gas concentration two orders of magnitude less than the ADEC soil gas target level. Again, tetrahydrofuran does not have an ADEC soil gas target level.

Eleven compounds were detected in the indoor air sample from the residence; however, only PCE and 1,4-dichlorobenzene exceeded their indoor air target levels. PCE was not detected in the outdoor air sample, so there appears to be no ambient source of the compound. Since 1,4-dichlorobenzene was not detected in the soil gas sample, it is assumed that there is a background source of the compound in the residence.

Given that PCE was detected in both the soil gas and indoor air samples at concentrations exceeding screening levels, the evidence suggests that PCE is present in the residence at least partially because of vapor intrusion, and possibly exceeds the indoor air target level because of vapor intrusion. The potential for some background source of PCE in the residence remains a possibility without sub-slab analytical data.

5.1.3. North Duplex

Table 5 presents analytical results for air samples collected in March 2009 from the north duplex located at 736 3rd Avenue. Figure 8 displays a subset of analytical results.

Only two compounds were detected in the soil gas sample from SG-3: PCE and tetrahydrofuran. The concentration of PCE was less than the ADEC soil gas target level, while tetrahydrofuran does not have a soil gas target level.

Seven compounds were detected in the crawl space air sample from the duplex; however, only PCE exceeded its indoor air target level. PCE was detected in the outdoor air sample at a low concentration that was negligible compared to the crawl space concentration of PCE.

PCE was detected in both the soil gas and crawl space air samples, but the crawl space concentration was significantly greater than the soil gas sample. This could be because there is a background source of PCE in the crawl space, or it could be a result of natural variation that occurs when sampling near-slab soil gas. The data is too inconclusive at this point to effectively evaluate the vapor intrusion pathway.

5.1.4. South Duplex

Table 6 presents analytical results for air samples collected in March 2009 from the south duplex located at 736 3rd Avenue. Figure 8 displays a subset of analytical results.

Only two compounds were detected in the soil gas sample from SG-4: PCE and tetrahydrofuran. The concentration of PCE exceeded the ADEC soil gas target level, while tetrahydrofuran does not have a soil gas target level for comparison.

Eight compounds were detected in the crawl space air sample from the duplex; however, only PCE exceeded an indoor air target level. PCE was detected in the outdoor air sample at a concentration that likely has minimal contribution to the measured crawl space air concentration for PCE.

Given that PCE was detected in both the soil gas and crawl space air samples at concentrations exceeding screening levels, the evidence suggests that PCE is present in the crawl space at least partially because of vapor intrusion, and possibly exceeds the

indoor air target level because of vapor intrusion. The potential for some background source of PCE in the crawl space or residence remains a possibility.

5.2. June 2009

Samples were collected on June 12 and 13, 2009. The barometric pressure experienced a downward trend during the 24 hours of sample collection. The readings began at 29.80 inHg and ended at 29.71 inHg. The minimum pressure was 29.71 inHg, and the maximum was 29.83 inHg (see Figure 9). Temperatures ranged from 48 degrees Fahrenheit to 63 degrees Fahrenheit. Conditions were mostly sunny at the beginning of sampling, but it rained overnight and gave way to overcast skies during the second day.

5.2.1. 710 3rd Avenue

Table 7 presents analytical results for air samples collected in June 2009 at 710 3rd Avenue. Figure 10 displays a subset of analytical results.

Acetone, 2-butanone, and PCE were the only compounds detected in the soil gas sample from SG-1. The concentration of PCE exceeded the ADEC soil gas target level, while the concentrations of acetone and 2-butanone were less than soil gas target levels.

Eighteen compounds were detected in the indoor air sample from the residence, including acetone, 2-butanone, and PCE, although benzene and 1,4-dichorobenzene were the only compounds that exceeded indoor air target levels. However, if the outdoor air concentration of benzene is subtracted from the indoor air concentration, the resulting concentration is less than the indoor air target level for benzene. Therefore, the exceedance of the indoor air target level for benzene is assumed to be attributable to ambient sources. In addition, since 1,4-dichlorobenzene was not detected in the soil gas sample, it is assumed that there is a background source of the compound in the residence.

Given that PCE was detected in both the soil gas and indoor air samples, the evidence suggests that PCE is present in the residence at least partially because of vapor intrusion. At the time of sampling, the indoor air concentration was less than the indoor air target level. The potential for some background source of PCE in the residence remains a possibility without sub-slab analytical data.

5.2.2. 720 3rd Avenue

Table 8 presents analytical results for air samples collected in June 2009 at 720 3rd Avenue. Figure 10 displays a subset of analytical results.

PCE was the only compound detected in the soil gas sample from SG-2, although reporting limits were elevated because of the high PCE concentration, which was more than two orders of magnitude greater than the ADEC soil gas target level.

Sixteen compounds were detected in the indoor air sample from the residence; however, only PCE and 1,4-dichlorobenzene exceeded indoor air target levels. PCE was not detected in the outdoor air sample, so there appears to be no ambient source of the

compound. Since 1,4-dichlorobenzene was not detected in the soil gas sample, it is assumed that there is a background source of the compound in the residence.

Given that PCE was detected in both the soil gas and indoor air samples at concentrations exceeding screening levels, the evidence suggests that PCE is present in the residence at least partially because of vapor intrusion, and possibly exceeds the indoor air target level because of vapor intrusion. The potential for some background source of the PCE in the residence remains a possibility without sub-slab analytical data.

5.2.3. North Duplex

Table 9 presents analytical results for air samples collected in June 2009 from the north duplex located at 736 3rd Avenue. Figure 10 displays a subset of analytical results.

PCE was the only compound detected in the soil gas sample from SG-3, and the concentration exceeded the ADEC soil gas target level.

Fifteen compounds were detected in the crawl space air sample from the duplex; however, only PCE exceeded an indoor air target level. PCE was not detected in the outdoor air sample, so there appears to be no ambient source of the compound.

Given that PCE was detected in both the soil gas and crawl space air samples at concentrations exceeding screening levels, the evidence suggests that PCE is present in the crawl space at least partially because of vapor intrusion, and possibly exceeds the indoor air target level because of vapor intrusion. The potential for some background source of PCE in the crawl space or residence remains a possibility without sub-slab analytical data.

5.2.4. South Duplex

Table 10 presents analytical results for air samples collected in June 2009 from the south duplex located at 736 3rd Avenue. Figure 10 displays a subset of analytical results.

Acetone, 2-butanone, and PCE were the only compounds detected in the soil gas sample from SG-4. The concentration of PCE exceeded the ADEC soil gas target level, while the concentrations of acetone and 2-butanone were less than soil gas target levels.

Fifteen compounds were detected in the crawl space air sample from the duplex; however, only benzene exceeded an indoor air target level. Since benzene was not detected in the soil gas sample, it is assumed that there is a background source of the compound in the residence. PCE was not detected in the crawl space air sample.

Both acetone and 2-butanone were detected in both the soil gas and crawl space air samples, but the resulting concentrations do not exceed screening levels. Therefore, it is possible that these compounds are present in the crawl space at least partially because of vapor intrusion, but the risk associated with them appears minimal.

6. QUALITY ASSURANCE REVIEW

This section summarizes the results of a data review to determine data quality and to evaluate potential impact on the usability of the data. The review was performed using EPA Level II laboratory data reports that were provided by Air Toxics Ltd. Laboratory analytical reports are provided in Appendix D. ADEC data review checklists for air analysis are included in Appendix E.

The following list provides a brief review of how the data compared to data quality indicators:

- All work was performed by OASIS personnel who are qualified individuals as per 18 AAC 75.990(100).
- Completeness–100% of samples submitted were analyzed, thereby meeting the data quality objective of 95%.
- Accuracy–All percent recoveries for surrogates met control limits. All percent recoveries for laboratory control samples met control limits except for bromomethane and MTBE for the March data and chloroethane for the June data. Given that these compounds are not contaminants of concern and they were not detected in samples, no data qualification is necessary. Method blanks had no detections above laboratory reporting limits.
- Precision–A field duplicate sample was collected for both TO-15 and TO-15 LL analysis, and the laboratory ran a laboratory duplicate for both analyses. The field duplicates and laboratory duplicates met laboratory criteria for relative percent differences except for some compounds in the field duplicates where compounds were present at concentrations below the laboratory reporting limit in one of the samples.
- Comparability–Samples were analyzed by the same analytical methods between sample events. Laboratory reporting limits were less than target indoor air levels for contaminants of concern.
- Representativeness–Air sample collection rates were based on possible exposure scenarios. Soil gas samples had leak detection performed prior to sampling to ensure that ambient air was not infiltrating the sample train. A trip blank was analyzed to assess potential cross-contamination at the site. The trip blank for the March sample event had reportable concentrations of chloromethane, ethanol, acetone, 2-propanol, methylene chloride, hexane, 2-butanone, cyclohexane, benzene, heptanes, toluene, ethylbenzene, and m-, p-, and o-xylenes. Samples with reportable concentrations of the previously listed analytes at less than ten times the concentration reported in the trip blank had their results changed to non-detect (ND) at the reported concentration and are flagged B as estimates. The trip blank for the June sample event had no detections above laboratory reporting limits.

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7. EVALUATION

OASIS collected air samples at four residences north of the 4th and Gambell site in March and June 2009. During each event, soil gas samples were collected adjacent to each residence from permanent soil gas monitoring points located near each building. Indoor air samples were collected at the two western residences, while crawl space air samples were collected at the two eastern residences. Outdoor air samples also were collected. The following subsections provide a summary of findings and recommendations.

7.1. Findings

Numerous compounds were detected in the indoor air or crawl space samples at all four buildings during both the March and June sample events; however, PCE was the only compound that regularly exceeded indoor air target levels and also was regularly detected in soil gas samples. PCE concentrations in indoor air or crawl space air decreased more than 50% from the March to June sample events in all four buildings, while the soil gas concentrations of PCE all increased by approximately an order of magnitude from the March to June sample events in all four monitoring points. This sharp variation is not understood at this point.

The following list shows by building when PCE exceeded indoor air target levels presumably as a result of vapor intrusion:

- 710 E 3rd Ave – both March and June
- 720 E 3rd Ave – both March and June
- 736 E 3rd Ave (North Duplex) – both March and June
- 736 E 3rd Ave (South Duplex) – March

The findings are based on near-building soil gas data combined with indoor or crawl space air data. It should be noted that near-building soil gas data is not as convincing a line of evidence as sub-slab data, but this also only applies to 710 E 3rd Ave and 720 E 3rd Ave because the duplexes have crawl spaces.

7.2. Recommendations

The following recommendations are provided to further investigate and understand the vapor intrusion pathway at the 4th and Gambell site. The recommendations serve as options for ADEC to consider in future project planning. ADEC is not obligated to enact or implement any or all of the recommendations.

- Inform the residents that indoor air concentrations of PCE are above target levels most likely because of vapor intrusion.
- For the two western residences, 710 E 3rd Ave and 720 E 3rd Ave, consider conducting sub-slab analysis to verify the conclusion that PCE is present in indoor air as a result of vapor intrusion.

- For the two eastern residences, the north and south duplexes, consider collecting indoor air samples to document exposure.
- The installation of the SMD system in the north duplex appears to have had little effect at mitigating the movement of PCE into the crawl space. This could be because approximately one-third of the crawl space is an old concrete foundation that had numerous holes where utilities formerly entered the building.
- Inform the property owners of possible mitigation options for reducing indoor air concentrations of PCE.
- If considered necessary, evaluate mitigation alternatives for the residences based on the criteria of effectiveness and cost.
- Consider performing a passive soil gas survey of the grounds between the residences in order to characterize the extent of PCE contamination, which was not fully defined during the limited site characterization effort.

8. REFERENCES

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TABLES

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Table 2
Air Sample Summary
4th and Gambell Vapor Intrusion Assessment

Sample Location	Building	Sample Number	Date	Sample Type	Duration	Description	Comments
AA-1	720 3rd Avenue	094AG113AA	3/2/2009	Outdoor Air	24-hour	Southeast side of residence	
		094AG122AA					Low sample recovery
IA-1	710 3rd Avenue	094AG110IA 094AG111IA	3/2/2009	Indoor Air	24-hour	Living room	094AG111IA is a duplicate
		094AG126IA 094AG127IA					
SG-1	710 3rd Avenue	094AG114SG 094AG115SG	3/3/2009	Soil Gas	30-minute	South side of building	094AG115SG is a duplicate
		094AG130SG 094AG131SG					
IA-2	720 3rd Avenue	094AG117IA	3/3/2009	Indoor Air	24-hour	Living room	
		094AG125IA					
SG-2	720 3rd Avenue	094AG116SG	3/3/2009	Soil Gas	30-minute	South side of building	
		094AG132SG					
AA-2	Duplexes	094AG106AA	3/2/2009	Outdoor Air	24-hour	Between duplexes	
		094AG121AA					Low sample recovery
CS-1	North Duplex	094AG107CS	3/2/2009	Crawl Space Air	24-hour	Center of crawl space/basement	
		094AG123CS					
SG-3	North Duplex	094AG112SG	3/2/2009	Soil Gas	30-minute	Southwest side of building	
		094AG128SG					
CS-2	South Duplex	094AG108CS	3/2/2009	Crawl Space Air	24-hour	East side of crawl space	
		094AG124CS					
SG-4	South Duplex	094AG109SG	3/2/2009	Soil Gas	30-minute	West side of building	
		094AG129SG					

Table 3
Analytical Results
710 E 3rd Avenue - March 2009
4th and Gambell Vapor Intrusion Assessment

Compound	Units	ADEC Indoor Air Target Level	ADEC Soil Gas Target Level	Indoor Air IA-1 Primary	Indoor Air IA-1 Duplicate	Outdoor Air AA-1	Soil Gas SG-1 Primary	Soil Gas SG-1 Duplicate
Field Parameters								
Soil Moisture	%	---	---	---	---	---	7.0	---
Total Volatile Hydrocarbons	ppm	---	---	---	---	---	35	---
Oxygen	%	---	---	---	---	---	20.9	---
Carbon dioxide	%	---	---	---	---	---	0.2	---
Helium	%	---	---	---	---	---	0.01	---
Volatile Organic Compounds								
Freon 12	µg/m^3	210	2,100	3.1	3.1	3.4	ND (6.0)	ND (5.9)
Chloromethane	µg/m^3	29	290	ND (0.91) B	ND (1.3) B	ND (1.3) B	ND (10)	ND (9.9)
Freon 11	µg/m^3	730	7,300	1.5	1.5	1.7	ND (6.8)	ND (6.7)
Ethanol	µg/m^3	---	---	400 E	320 E	ND (1.5) B	ND (9.2)	ND (10) B
Acetone	µg/m^3	3,300	32,900	ND (5.5) B	ND (18) B	ND (4.9) B	ND (12)	ND (11)
2-propanol	µg/m^3	---	---	ND (4.9) B	ND (5.2) B	ND (1.5)	ND (12)	ND (12)
Hexane	µg/m^3	---	---	ND (5.0) B	ND (5.3) B	ND (0.59) B	ND (4.3)	ND (4.2)
2-butanone	µg/m^3	5,200	52,100	ND (6.9) B	ND (3.7) B	ND (0.36)	ND (3.6)	ND (3.5)
Cyclohexane	µg/m^3	---	---	ND (2.6) B	ND (2.7) B	ND (0.43)	ND (4.2)	ND (4.1)
Benzene	µg/m^3	3.1	31	**10**	**11**	ND (2.1) B	ND (3.9)	ND (3.8)
Heptane	µg/m^3	---	---	ND (2.9) B	ND (4.0) B	ND (0.51)	ND (5.0)	ND (4.9)
Toluene	µg/m^3	5,200	52,100	ND (36) B	ND (39) B	ND (3.7) B	ND (4.6)	ND (4.5)
Tetrahydrofuran	µg/m^3	---	---	ND (2.5)	ND (2.5)	ND (1.8)	4.0	4.1
PCE	µg/m^3	4.1	41	**8.0**	**8.2**	ND (0.84)	**45**	**45**
Ethylbenzene	µg/m^3	22	220	ND (5.7) B	ND (6.1) B	ND (0.54)	ND (5.3)	ND (5.2)
Xylenes	µg/m^3	100	1,000	31	33	ND (0.99) B	ND (5.3)	ND (5.2)
Propylbenzene	µg/m^3	37	370	0.96	1.0	ND (0.61)	ND (6.0)	ND (5.9)
4-ethyltoluene	µg/m^3	---	---	3.3	3.9	ND (0.61)	ND (6.0)	ND (5.9)
1,3,5-trimethylbenzene	µg/m^3	7.3	73	1.0	1.4	ND (0.61)	ND (6.0)	ND (5.9)
1,2,4-trimethylbenzene	µg/m^3	7.3	73	3.5	4.7	ND (0.61)	ND (6.0)	ND (5.9)
1,4-dichlorobenzene	µg/m^3	3.5	35	**4.6**	**4.8**	ND (0.74)	ND (7.3)	ND (7.2)

Notes: Value in parentheses is laboratory reporting limit.
Bolded value exceeds screening level.

Key:
% = Percent
ADEC = Alaska Department of Environmental Conservation
B = Analyte contamination was reported in the trip blank at similar concentrations.
EPA = Environmental Protection Agency
E = Exceeds instrument calibration range
µg/m^3 = Micrograms per cubic meter
ND = Not detected
ppm = Parts per million
TIAC = Target indoor air concentration
PCE = Tetrachloroethene

Table 4
Analytical Results
720 E 3rd Avenue - March 2009
4th and Gambell Vapor Intrusion Assessment

Compound	Units	ADEC Indoor Air Target Level	ADEC Soil Gas Target Level	Indoor Air IA-2	Outdoor Air AA-1	Soil Gas SG-2
Field Parameters						
Soil Moisture	---	---	---	---	---	7.5
Total Volatile Hydrocarbons	ppm	---	---	---	---	110
Oxygen	%	---	---	---	---	20.9
Carbon dioxide	%	---	---	---	---	0.7
Helium	%	---	---	---	---	0
Volatile Organic Compounds						
Freon 12	µg/m^3	210	2,100	4.1	3.4	6.6
Chloromethane	µg/m^3	29	290	ND (1.1) B	ND (1.3) B	ND (10)
Freon 11	µg/m^3	730	7,300	1.6	1.7	ND (7.0)
Ethanol	µg/m^3	---	---	410 E	ND (1.5) B	ND (9.4)
Acetone	µg/m^3	3,300	32,900	310 E	ND (4.9) B	ND (12)
2-propanol	µg/m^3	---	---	ND (8.5) B	ND (1.5)	ND (12)
Hexane	µg/m^3	---	---	ND(2.2) B	ND (0.59) B	ND (4.4)
2-butanone	µg/m^3	5,200	52,100	29	ND (0.36)	ND (3.7)
Tetrahydrofuran	µg/m^3	---	---	7.2	ND (1.8)	6.8
Cyclohexane	µg/m^3	---	---	ND (1.2) B	ND (0.43)	ND (4.3)
Benzene	µg/m^3	3.1	31	ND (2.6) B	ND (2.1) B	ND (4.0)
Heptane	µg/m^3	---	---	ND (2.8) B	ND (0.51)	ND (5.1)
Toluene	µg/m^3	5,200	52,100	ND (14) B	ND (3.7) B	ND (8.0) B
PCE	µg/m^3	4.1	41	**58**	ND (0.84)	**2,100**
Chlorobenzene	µg/m^3	52	520	1.5	ND (0.57)	ND (5.8)
Ethylbenzene	µg/m^3	22	220	ND (1.7) B	ND (0.54)	ND (5.4)
Xylenes	µg/m^3	100	1,000	ND (8.4) B	ND (0.99) B	ND (5.4)
Styrene	µg/m^3	1,000	10,000	0.97	ND (0.53)	ND (5.3)
1,2,4-trimethylbenzene	µg/m^3	7.3	73	1.0	ND (0.61)	ND (6.1)
1,4-dichlorobenzene	µg/m^3	3.5	35	**23**	ND (0.74)	ND (7.5)

Notes: Value in parentheses is laboratory reporting limit.
Bolded value exceeds screening level.

Key:
% = Percent
ADEC = Alaska Department of Environmental Conservation
B = Analyte contamination was reported in the trip blank at similar concentrations.
EPA = Environmental Protection Agency
E = Exceeds instrument calibration range
µg/m^3 = Micrograms per cubic meter
ND = Not detected
ppm = Parts per million
TIAC = Target indoor air concentration
PCE = Tetrachloroethene

Table 5
Analytical Results
North Duplex - March 2009
4th and Gambell Vapor Intrusion Assessment

Compound	Units	ADEC Indoor Air Target Level	ADEC Soil Gas Target Level	Crawl Space Air CS-1	Outdoor Air AA-2	Soil Gas SG-3
Field Parameters						
Soil Moisture	---	---	---	---	---	4.7
Total Volatile Hydrocarbons	ppm	---	---	---	---	200
Oxygen	%	---	---	---	---	20.9
Carbon dioxide	%	---	---	---	---	0.9
Helium	%	---	---	---	---	0
Volatile Organic Compounds						
Freon 12	$\mu g/m^3$	210	2,100	6.6	3.1	ND (6.8)
Chloromethane	$\mu g/m^3$	29	290	ND (1.2) B	ND (0.98) B	ND (11)
Freon 11	$\mu g/m^3$	730	7,300	1.8	1.6	ND (7.8)
Ethanol	$\mu g/m^3$	---	---	200 E	ND (1.8) B	ND (10)
Acetone	$\mu g/m^3$	3,300	32,900	ND (14) B	ND (14) B	ND (13)
2-propanol	$\mu g/m^3$	---	---	37	ND (1.6) B	ND (14)
Hexane	$\mu g/m^3$	---	---	ND (7.8) B	ND 0.59) B	ND (4.9)
2-butanone	$\mu g/m^3$	5,200	52,100	ND (1.8) B	ND (4.6) B	ND (6.2) B
Tetrahydrofuran	$\mu g/m^3$	---	---	ND (1.9)	ND (1.9)	7.6
Cyclohexane	$\mu g/m^3$	---	---	8.4	ND (0.44)	ND (4.8)
Benzene	$\mu g/m^3$	3.1	31	ND (3.6) B	ND (2.0) B	ND (4.4)
Heptane	$\mu g/m^3$	---	---	ND (7.9) B	ND (0.54) B	ND (5.6)
Toluene	$\mu g/m^3$	5,200	52,100	ND (8.3) B	ND (4.6) B	ND (8.6) B
PCE	$\mu g/m^3$	4.1	41	**170**	0.95	17
Ethylbenzene	$\mu g/m^3$	22	220	ND (1.1) B	ND (0.59) B	ND (6.0)
Xylenes	$\mu g/m^3$	100	1,000	ND (4.8) B	ND 2.8) B	ND (6.0)
Styrene	$\mu g/m^3$	1,000	10,000	0.64	0.56	ND (5.9)

Notes: Value in parentheses is laboratory reporting limit.
Bolded value exceeds screening level.

Key:
% = Percent
ADEC = Alaska Department of Environmental Conservation
B = Analyte contamination was reported in the trip blank at similar concentrations.
EPA = Environmental Protection Agency
E = Exceeds instrument calibration range
$\mu g/m^3$ = Micrograms per cubic meter
ND = Not detected
ppm = Parts per million
TIAC = Target indoor air concentration
PCE = Tetrachloroethene

Table 6
Analytical Results
South Duplex - March 2009
4th and Gambell Vapor Intrusion Assessment

Compound	Units	ADEC Indoor Air Target Level	ADEC Soil Gas Target Level	Crawl Space Air CS-2	Outdoor Air AA-2	Soil Gas SG-4
Field Parameters						
Soil Moisture	---	---	---	---	---	3.8
Total Volatile Hydrocarbons	ppm	---	---	---	---	150
Oxygen	%	---	---	---	---	20.9
Carbon dioxide	%	---	---	---	---	0.6
Helium	%	---	---	---	---	0.015
Volatile Organic Compounds						
Freon 12	$\mu g/m^3$	210	2,100	2.7	3.1	ND (6.1)
Chloromethane	$\mu g/m^3$	29	290	2.4	ND (0.98) B	ND (10)
1,3-butadiene	$\mu g/m^3$	---	---	1.3	ND (0.28)	ND (2.7)
Freon 11	$\mu g/m^3$	730	7,300	1.8	1.6	ND (3.2)
Ethanol	$\mu g/m^3$	---	---	1,000 E	ND (1.8) B	ND (17) B
Acetone	$\mu g/m^3$	3,300	32,900	120	ND (14) B	ND (38) B
2-propanol	$\mu g/m^3$	---	---	250	ND (1.6) B	ND (12)
Hexane	$\mu g/m^3$	---	---	ND (1.0)	ND 0.59) B	ND (4.3)
2-butanone	$\mu g/m^3$	5,200	52,100	ND (3.8) B	ND (4.6) B	ND (14) B
Tetrahydrofuran	$\mu g/m^3$	---	---	ND (4.2)	ND (1.9)	31
Cyclohexane	$\mu g/m^3$	---	---	ND (0.98)	ND (0.44)	ND (4.2)
Benzene	$\mu g/m^3$	3.1	31	ND (3.8) B	ND (2.0) B	ND (3.9)
Heptane	$\mu g/m^3$	---	---	ND (1.2)	ND (0.54) B	ND (5.0)
Toluene	$\mu g/m^3$	5,200	52,100	ND (8.0) B	ND (4.6) B	ND (7.6) B
PCE	$\mu g/m^3$	4.1	41	**14**	0.95	**89**
Ethylbenzene	$\mu g/m^3$	22	220	ND (1.2)	ND (0.59) B	ND (5.3) B
Xylenes	$\mu g/m^3$	100	1,000	ND (3.4) B	ND 2.8) B	ND (8.7) B
Styrene	$\mu g/m^3$	1,000	10,000	ND (1.2)	0.56	ND (5.2)

Notes: Value in parentheses is laboratory reporting limit.
Bolded value exceeds screening level.

Key:
% = Percent
ADEC = Alaska Department of Environmental Conservation
E = Exceeds instrument calibration range
B = Analyte contamination was reported in the trip blank at similar concentrations.
EPA = Environmental Protection Agency
$\mu g/m^3$ = Micrograms per cubic meter
ND = Not detected
PCE = Tetrachloroethene
ppm = Parts per million
TIAC = Target indoor air concentration

Table 7
Analytical Results
710 E 3rd Avenue - June 2009
4th and Gambell Vapor Intrusion Assessment

Compound	Units	ADEC Indoor Air Target Level	ADEC Soil Gas Target Level	Indoor Air IA-1 Primary	Indoor Air IA-1 Duplicate	Outdoor Air AA-1	Soil Gas SG-1 Primary	Soil Gas SG-1 Duplicate
Field Parameters								
Total Volatile Hydrocarbons	ppm	---	---	---	---	---	45	---
Oxygen	%	---	---	---	---	---	20.7	---
Carbon dioxide	%	---	---	---	---	---	0.5	---
Helium	%	---	---	---	---	---	0	---
Volatile Organic Compounds								
Freon 12	µg/m^3	210	2,100	2.5	2.5	ND (3.3)	ND (6.1)	ND (6.0)
Chloromethane	µg/m^3	29	290	0.90	1.2	ND (1.4)	ND (10)	ND (10)
Freon 11	µg/m^3	730	7,300	1.5	1.2	ND (3.8)	ND (6.9)	ND (6.8)
Ethanol	µg/m^3	---	---	610 E	590 E	ND (6.3)	ND (9.3)	ND (9.1)
Acetone	µg/m^3	3,300	32,900	21	43	43	21	ND (11)
2-propanol	µg/m^3	---	---	2.7	3.2	ND (8.2)	ND (12)	ND (12)
Hexane	µg/m^3	---	---	2.1	2.2	ND (2.4)	ND (4.4)	ND (4.3)
2-butanone	µg/m^3	5,200	52,100	0.99	3.3	4.1	6.9	ND (3.6)
Cyclohexane	µg/m^3	---	---	1.2	1.2	ND (2.3)	ND (4.2)	ND (4.2)
Benzene	µg/m^3	3.1	31	**4.7**	**4.8**	3.0	ND (3.9)	ND (3.9)
Heptane	µg/m^3	---	---	2.0	2.0	ND (2.7)	ND (5.1)	ND (5.0)
Toluene	µg/m^3	5,200	52,100	20	20	4.7	ND (4.6)	ND (4.6)
PCE	µg/m^3	4.1	41	2.3	2.1	ND (4.5)	**300**	**300**
Ethylbenzene	µg/m^3	22	220	3.8	3.5	ND (2.9)	ND (5.4)	ND (5.2)
Xylenes	µg/m^3	100	1,000	18	18	ND (2.9)	ND (5.4)	ND (5.2)
4-ethyltoluene	µg/m^3	---	---	2.3	2.2	ND (3.3)	ND (6.1)	ND (5.9)
1,3,5-trimethylbenzene	µg/m^3	7.3	73	ND (0.81)	0.81	ND (3.3)	ND (6.1)	ND (5.9)
1,2,4-trimethylbenzene	µg/m^3	7.3	73	2.4	2.1	ND (3.3)	ND (6.1)	ND (5.9)
1,4-dichlorobenzene	µg/m^3	3.5	35	**8.5**	**8.2**	ND (4.0)	ND (7.4)	ND (7.3)

Notes: Value in parentheses is laboratory reporting limit.
Bolded value exceeds screening level.

Key:
% = Percent
ADEC = Alaska Department of Environmental Conservation
E = Exceeds instrument calibration range
EPA = Environmental Protection Agency
µg/m^3 = Micrograms per cubic meter
ND = Not detected
PCE = Tetrachloroethene
ppm = Parts per million
TIAC = Target indoor air concentration

Table 8
Analytical Results
720 E 3rd Avenue - June 2009
4th and Gambell Vapor Intrusion Assessment

Compound	Units	ADEC Indoor Air Target Level	ADEC Soil Gas Target Level	Indoor Air IA-2	Outdoor Air AA-1	Soil Gas SG-2
Field Parameters						
Total Volatile Hydrocarbons	ppm	---	---	---	---	15
Oxygen	%	---	---	---	---	20.6
Carbon dioxide	%	---	---	---	---	0.5
Helium	%	---	---	---	---	0
Volatile Organic Compounds						
Freon 12	$\mu g/m^3$	210	2,100	3.3	ND (3.3)	ND (60)
Chloromethane	$\mu g/m^3$	29	290	1.1	ND (1.4)	ND (100)
Freon 11	$\mu g/m^3$	730	7,300	1.5	ND (3.8)	ND (68)
Ethanol	$\mu g/m^3$	---	---	400 E	ND (6.3)	ND (91)
Acetone	$\mu g/m^3$	3,300	32,900	650 E	43	ND (110)
2-propanol	$\mu g/m^3$	---	---	11	ND (8.2)	ND (120)
Hexane	$\mu g/m^3$	---	---	1.4	ND (2.4)	ND (43)
2-butanone	$\mu g/m^3$	5,200	52,100	17	4.1	ND (36)
Cyclohexane	$\mu g/m^3$	---	---	1.1	ND (2.3)	ND (42)
Benzene	$\mu g/m^3$	3.1	31	2.3	3.0	ND (39)
Heptane	$\mu g/m^3$	---	---	5.4	ND (2.7)	ND (50)
Toluene	$\mu g/m^3$	5,200	52,100	19	4.7	ND (46)
PCE	$\mu g/m^3$	4.1	41	**15**	ND (4.5)	**13,000**
Ethylbenzene	$\mu g/m^3$	22	220	1.4	ND (2.9)	ND (52)
Xylenes	$\mu g/m^3$	100	1,000	6.9	ND (2.9)	ND (52)
1,4-dichlorobenzene	$\mu g/m^3$	3.5	35	**160**	ND (4.0)	ND (73)

Notes: Value in parentheses is laboratory reporting limit.
Bolded value exceeds screening level.

Key:
% = Percent
ADEC = Alaska Department of Environmental Conservation
E = Exceeds instrument calibration range
EPA = Environmental Protection Agency
$\mu g/m^3$ = Micrograms per cubic meter
ND = Not detected
PCE = Tetrachloroethene
ppm = Parts per million
TIAC = Target indoor air concentration

Table 9
Analytical Results
North Duplex - June 2009
4th and Gambell Vapor Intrusion Assessment

Compound	Units	ADEC Indoor Air Target Level	ADEC Soil Gas Target Level	Crawl Space Air CS-1	Outdoor Air AA-2	Soil Gas SG-3
Field Parameters						
Total Volatile Hydrocarbons	ppm	---	---	---	---	30
Oxygen	%	---	---	---	---	20.7
Carbon dioxide	%	---	---	---	---	0.4
Helium	%	---	---	---	---	0
Volatile Organic Compounds						
Freon 12	$\mu g/m^3$	210	2,100	3.8	ND (3.6)	ND (6.2)
Chloromethane	$\mu g/m^3$	29	290	1.0	ND (1.5)	ND (10)
1,3-butadiene	$\mu g/m^3$	---	---	1.8	ND (1.6)	ND (2.8)
Freon 11	$\mu g/m^3$	730	7,300	1.6	ND (4.1)	ND (7.1)
Ethanol	$\mu g/m^3$	---	---	240 E	ND (6.9)	ND (9.5)
Acetone	$\mu g/m^3$	3,300	32,900	32	14	ND (12)
2-propanol	$\mu g/m^3$	---	---	3.0	ND (9.0)	ND (12)
Hexane	$\mu g/m^3$	---	---	1.2	ND (2.6)	ND (4.4)
2-butanone	$\mu g/m^3$	5,200	52,100	2.7	2.2	ND (3.7)
Cyclohexane	$\mu g/m^3$	---	---	2.6	ND (2.5)	ND (4.4)
Benzene	$\mu g/m^3$	3.1	31	2.2	2.7	ND (4.0)
Heptane	$\mu g/m^3$	---	---	3.1	ND (3.0)	ND (5.2)
Toluene	$\mu g/m^3$	5,200	52,100	3.5	3.9	ND (4.8)
PCE	$\mu g/m^3$	4.1	41	**74**	ND (5.0)	**86**
Xylenes	$\mu g/m^3$	100	1,000	0.83	ND (3.2)	ND (5.5)

Notes: Value in parentheses is laboratory reporting limit.
Bolded value exceeds screening level.

Key:
% = Percent
ADEC = Alaska Department of Environmental Conservation
E = Exceeds instrument calibration range
EPA = Environmental Protection Agency
$\mu g/m^3$ = Micrograms per cubic meter
ND = Not detected
PCE = Tetrachloroethene
ppm = Parts per million
TIAC = Target indoor air concentration

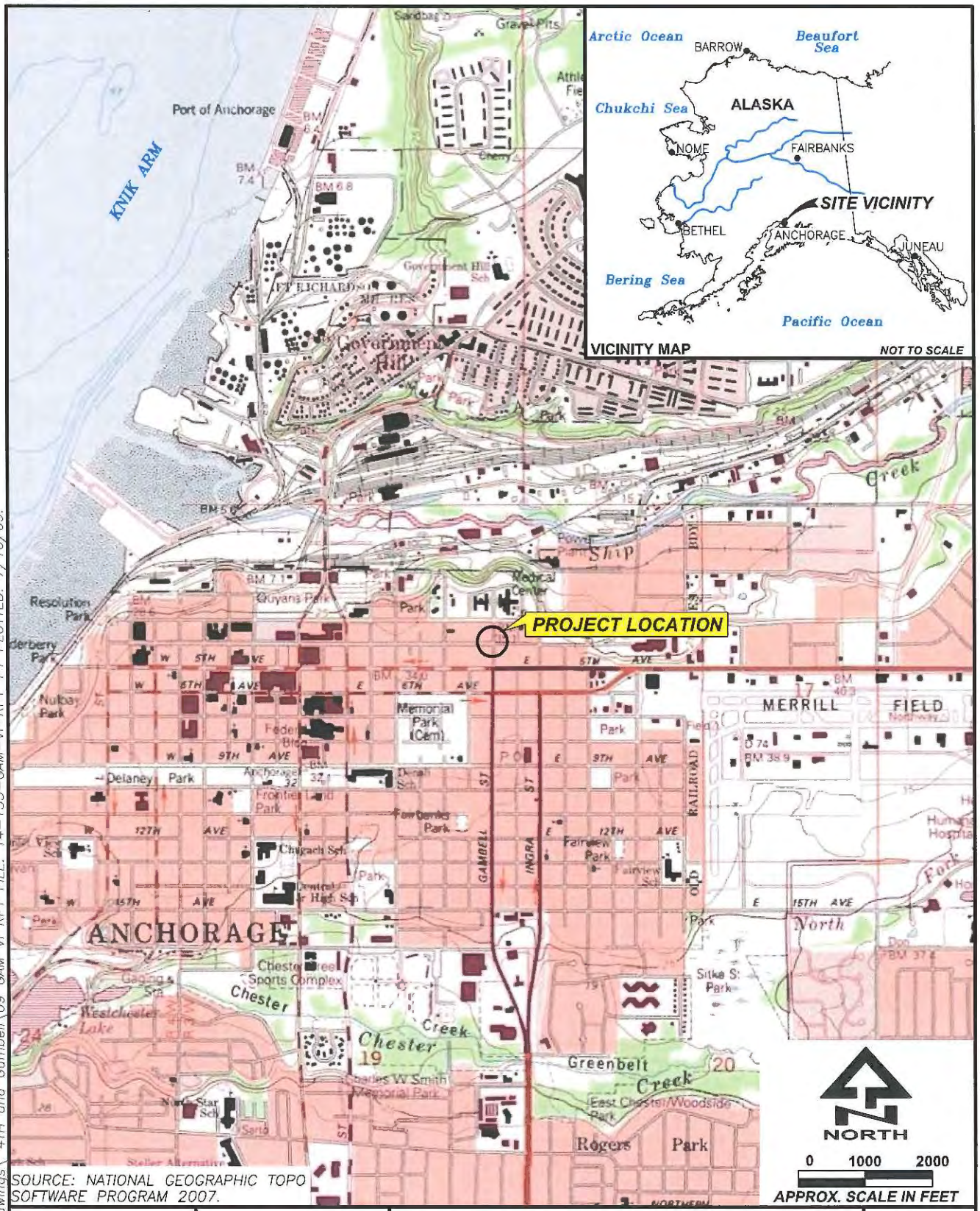
Table 10
Analytical Results
South Duplex - June 2009
4th and Gambell Vapor Intrusion Assessment

Compound	Units	ADEC Indoor Air Target Level	ADEC Soil Gas Target Level	Crawl Space Air CS-2	Outdoor Air AA-2	Soil Gas SG-4
Field Parameters						
Total Volatile Hydrocarbons	ppm	---	---	---	---	0
Oxygen	%	---	---	---	---	20.7
Carbon dioxide	%	---	---	---	---	0.4
Helium	%	---	---	---	---	0
Volatile Organic Compounds						
Freon 12	$\mu g/m^3$	210	2,100	20	ND (3.6)	ND (6.1)
Chloromethane	$\mu g/m^3$	29	290	5.4	ND (1.5)	ND (10)
1,3-butadiene	$\mu g/m^3$	---	---	4.0	ND (1.6)	ND (2.7)
Freon 11	$\mu g/m^3$	730	7,300	1.8	ND (4.1)	ND (6.9)
Ethanol	$\mu g/m^3$	---	---	1,300 E	ND (6.9)	ND (9.3)
Acetone	$\mu g/m^3$	3,300	32,900	100	14	30
2-propanol	$\mu g/m^3$	---	---	80	ND (9.0)	ND (12)
Hexane	$\mu g/m^3$	---	---	0.60	ND (2.6)	ND (4.4)
2-butanone	$\mu g/m^3$	5,200	52,100	3.6	2.2	10
Benzene	$\mu g/m^3$	3.1	31	**8.1**	2.7	ND (3.9)
Heptane	$\mu g/m^3$	---	---	0.65	ND (3.0)	ND (5.1)
Toluene	$\mu g/m^3$	5,200	52,100	9.4	3.9	ND (4.6)
PCE	$\mu g/m^3$	4.1	41	ND (1.1)	ND (5.0)	**560**
Ethylbenzene	$\mu g/m^3$	22	220	0.89	ND (3.2)	ND (5.4)
Xylenes	$\mu g/m^3$	100	1,000	2.4	ND (3.2)	ND (5.4)
Styrene	$\mu g/m^3$	1,000	10,000	1.0	ND (3.1)	ND (5.3)

Notes: Value in parentheses is laboratory reporting limit.
Bolded value exceeds screening level.

Key:
% = Percent
ADEC = Alaska Department of Environmental Conservation
E = Exceeds instrument calibration range
EPA = Environmental Protection Agency
$\mu g/m^3$ = Micrograms per cubic meter
ND = Not detected
PCE = Tetrachloroethene
ppm = Parts per million
TIAC = Target indoor air concentration

FIGURES



SOURCE: NATIONAL GEOGRAPHIC TOPO SOFTWARE PROGRAM 2007.

PATH: V:\Project Drawings\ 4TH and Gambell\09 GAM VI RPT FILE: 14-135-GAM-VI-RPT-F1 PLOTTED: 7/10/09.

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CHKD: B.J.M.
DRAWN: K.J.S.
PROJ. No.: 14-139

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SITE LOCATION MAP

4TH AND GAMBELL
VAPOR INTRUSION REPORT
Anchorage, Alaska

FIGURE

1

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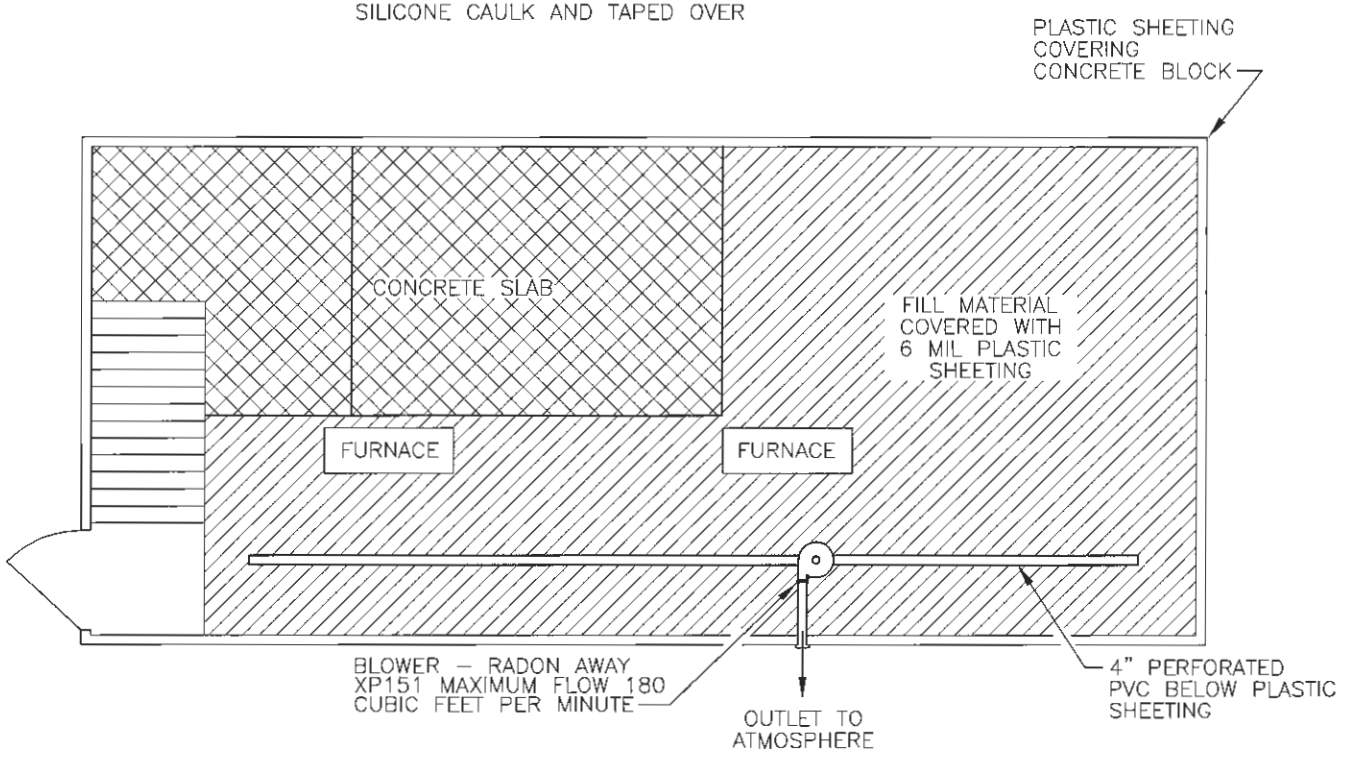
PREVIOUS SAMPLE LOCATIONS

4TH AND GAMBELL
VAPOR INTRUSION REPORT
Anchorage, Alaska

FIGURE
2

PATH: V:\Project Drawings\4TH and Gambell\09 GAM VI RPT FILE:14-139-GAM-VI-F3.DWG PLOTTED: 7/14/09.

NOTE:
ALL SEAMS BETWEEN PLASTIC SHEETS ARE SEALED WITH SILICONE CAULK AND TAPED OVER



NORTH

NOT TO SCALE

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SUB-MEMBRANE DEPRESSURIZATION SYSTEM AT NORTH DUPLEX

4TH AND GAMBELL
VAPOR INTRUSION ASSESSMENT
Anchorage, AK

FIGURE

3

PATH: V:\Project Drawings\4TH and Gambell\09 GAM\09 GAM VI RPT FILE: 14-135-GAM-VI-RPT-F4.DWG PLOTTED: 7/10/09..

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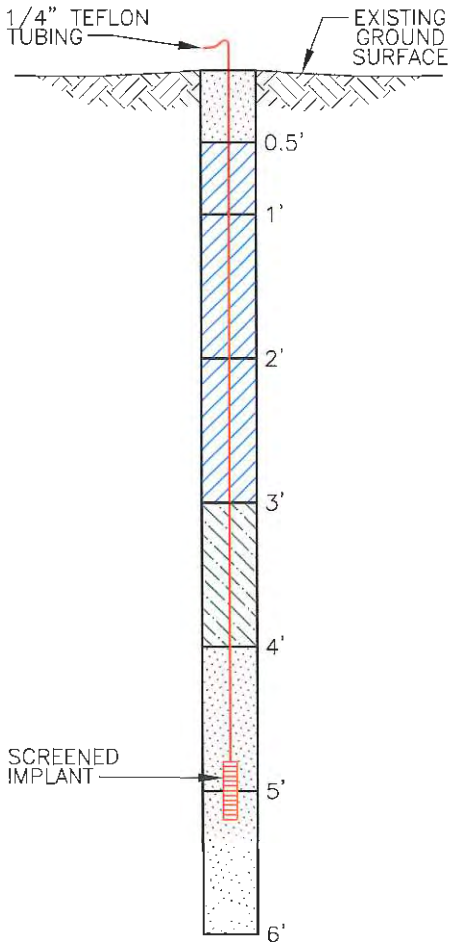
AIR SAMPLE LOCATIONS

4TH AND GAMBELL
VAPOR INTRUSION REPORT
Anchorage, Alaska

FIGURE
4



HYDRATED BENTONITE SLURRY

DRY GRANULAR BENTONITE

10/20 SILICA SAND

NOT TO SCALE

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TYPICAL SOIL GAS POINT

4TH AND GAMBELL
VAPOR INTRUSION REPORT
Anchorage, Alaska

FIGURE

5

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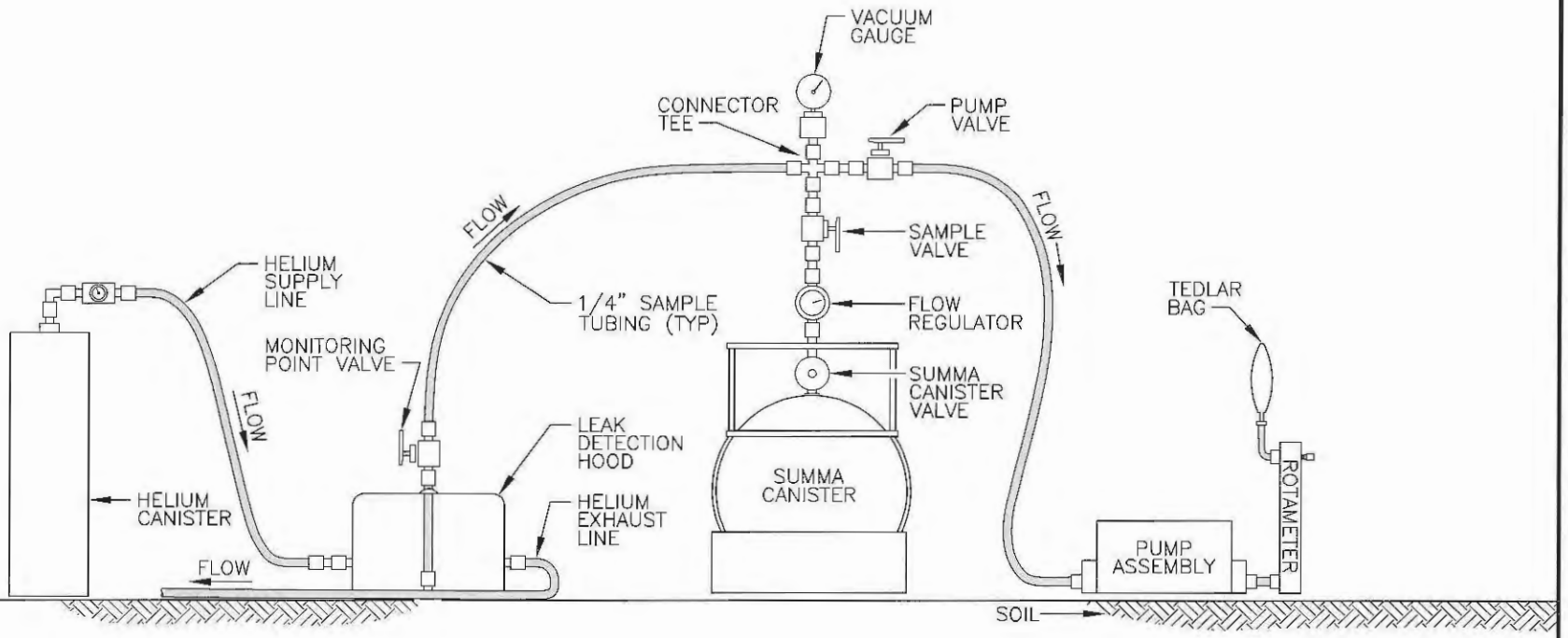

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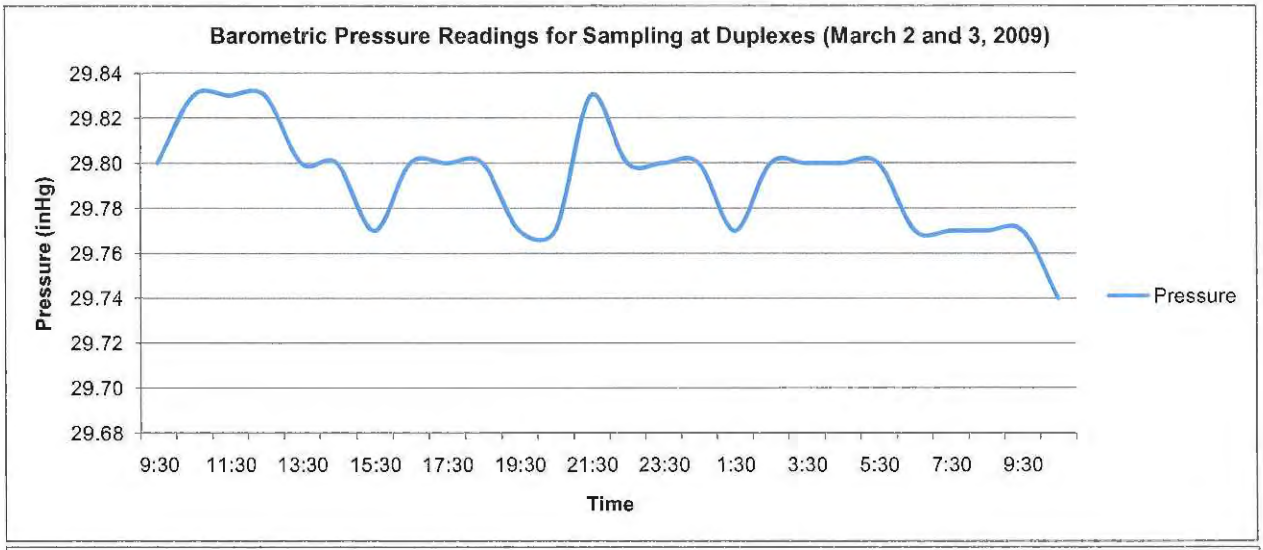
LEAK DETECTION SCHEMATIC

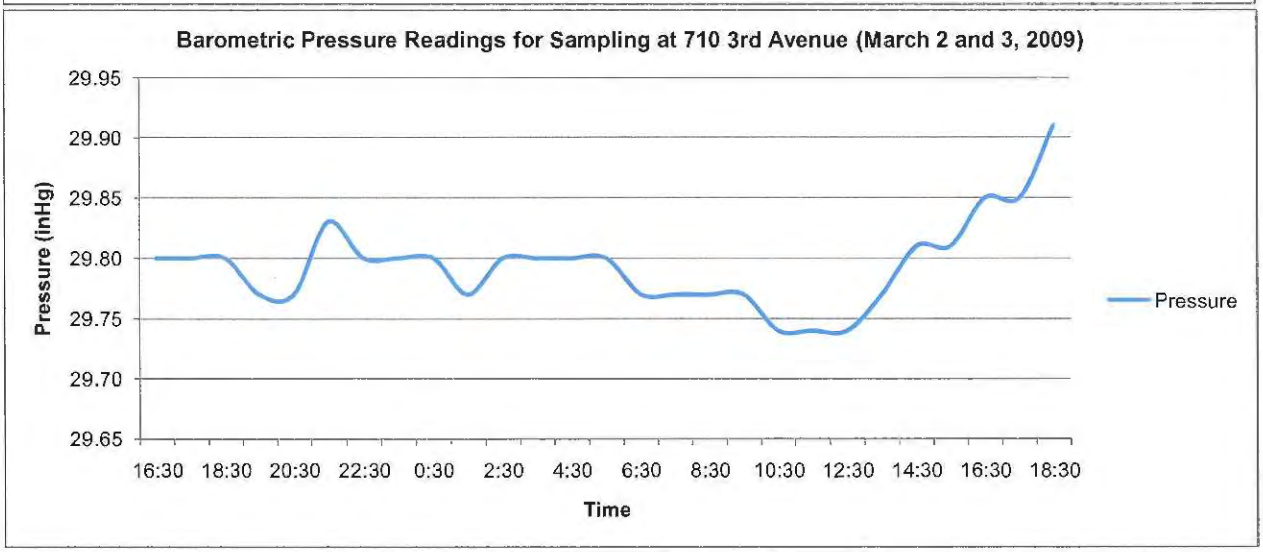
4TH AND GAMBELL
VAPOR INTRUSION REPORT
Anchorage, Alaska

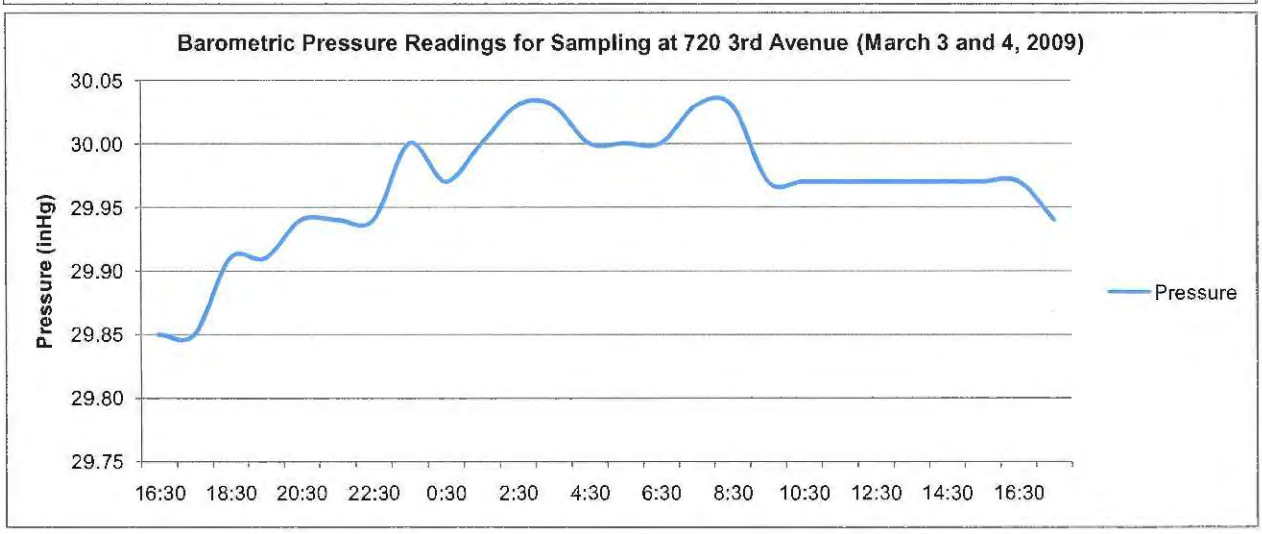
FIGURE

6

Figure 7. Barometric Pressure Readings (March 2009)
4th and Gambell Vapor Intrusion Assessment







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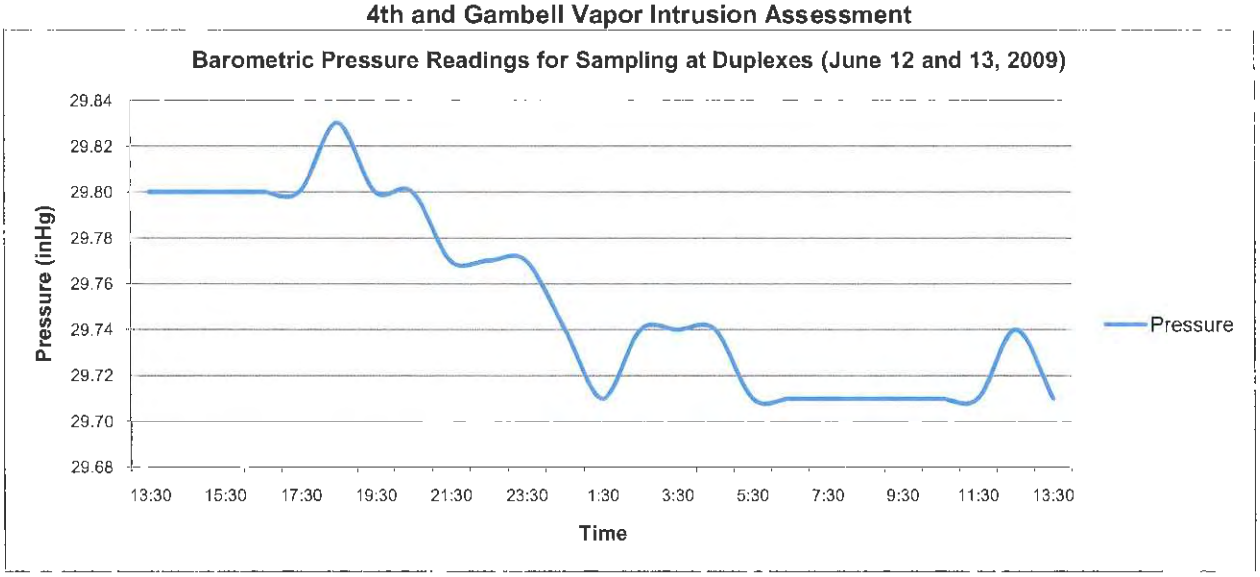
ANALYTICAL RESULTS (MARCH 2009)

4TH AND GAMBELL
VAPOR INTRUSION REPORT
Anchorage, Alaska

FIGURE
8

Figure 9. Barometric Pressure Readings (June 2009)
4th and Gambell Vapor Intrusion Assessment



PATH: V:\Project Drawings\4TH and Gambell\09 GAM\09 GAM VI RPT FILE: 14-135-GAM-VI-RPT-A.DWG PLOTTED: 4/1/09..

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ANALYTICAL RESULTS (JUNE 2009)

4TH AND GAMBELL
VAPOR INTRUSION REPORT
Anchorage, Alaska

FIGURE

10

APPENDIX A

Field Notes

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(14)

2/18/09 4th + Gambell 14-139

1245 GeoTek Elliot Wilson + Dmitri Rady and OASIS Ben Martich + Julie Clark at site. Hold HSE meeting covering SOW + hazards. Plan is to start by drilling all 4 points (SG-1 thru SG-4) and then install each point @ VMP after that.

1405 ADEC Todd Blessing and other regulators come to view work. Watch vmpt at SG-4 installed.

1430 ADEC reps depart site. GeoTek has installed SG-4, SG-3, SG-1. Working on SG-2.

1500 GeoTek completes installation of soil gas monitoring points. Begin flush mount construction.

Sample Summary

094AG101SB	SG-4	% moisture	1315
094AG102SB	SG-3	% moisture	1330
094AG103SB	SG-1	% moisture	1415
094AG104SB	SG-2	% moisture	1445
094AG105SB	Composite	TCLP VOCs	1500

1510 GeoTek still working on flush mounts. OASIS departs site.

Julie Clark 2/18/09

14-139 4th + Gambell 2/18/09

Note: Julie Clark drops off samples at SGS. Temp is high in cooler but that's b/c the samples just went in about 30 minutes

Note: Direct GeoTek to leave 5-gallon of bucket of soil cuttings next to MW-5. Bucket has hazardous waste label pending TCLP analysis by SGS. Bucket has screw lid

[signature] 2/18/09

"Rite in the Rain"

2/27/09 4th + Gambell 14-139

1005 OASIS Ben Mortich + OASIS Julie Clark arrive at Vicki's residence to do building inventory. Knock on Vicki's door. A woman answers that does not speak English. She ~~motions~~ I ask if Vicki is home. She motions that Vicki is on the phone. She then motions that we should go next door. ~~first~~ BM takes this to mean that while we wait for Vicki to get off the phone, we can do the inventory in the other house. BM also sensed that this lady lived over there. So BM + JC go to the other residence and walk in the front door. BM immediately hears noise and says hello. A lady yells at us to get out, saying "11:00" referring the time we were supposed to be over there. BM returns to knock on Vicki's door. The other lady answers the door (still no sign of Vicki). BM motions that the other lady yelled at us. She calls over there on the phone and after a short conversation, they step out on the

14-139 4th + Gambell 2/27/09

front porches to yell at each other a little more. When they're done, the lady in the second house yells at ~~to~~ us some more for being so rude. BM apologizes and she replies we should be sorry. BM + JC decide to leave the site and return at 11:00.

1105 BM + JC return and meet with Vicki Nikolich, who was the woman that was yelling at us. Complete both building inventories and agree to set out indoor air samples at 18:00 on Monday.

Note: Perform check of soil waste from last week. Bucket is in good shape + undisturbed.

[signature] 2/27/09

"Rite in the Rain"

3/2/09 4th & Gambell 14-139

On 2/27/09, in the afternoon, received analytical for soil samples collected during installation of soil gas points. TCLP result for bucket of IDW was ND for all compounds. The contents of the bucket can be managed as non-hazardous IDW.

0850 Arrive at Mark Cupples residence property. Set up weather station.

0905 Mark Cupples arrives at drops of keys for buildings.

0915 BM deploys outdoor air sample 094AG106AA between duplexes on Cupples property. Canister ID is 4241. Initial vacuum is 4241 -23 in Hg. 24-hour sample. Note that vacuum measured on an DASIS gauge b/c Air Toxics didn't provide one.

0930 BM deploys ~~indoor~~ crawl space air sample 094AG107CS in the northern duplex. Canister ID is 34192. Initial vacuum is 29.5 in Hg. 24-hour sample. There is an odor of natural gas in the crawl space. Also, the crawl space is half basement / half crawl space. About 1/3 of the area has

B. Mast 3/2/09

14-139 4th & Gambell 3/2/09

Weather Readings

Date	Time	Temp	Press	Date	Time	Temp	Press
3/2/09	0930	2.8°F	29.80 in Hg	3/3	0730		29.77
	1030		29.83		0830	10.4	29.77
	1130		29.83		0930		29.77
	1230		29.83		1030		29.74
	1330		29.80		1130	12.9	29.74
	1430	19.8	29.80		1230		29.74
	1530		29.77		1330		29.77
	1630		29.80		1430		29.81
	1730	19.9	29.80		1530		29.81
	1830		29.80		1630		29.85
	1930		29.77		1730		29.85
	2030		29.77		1830		29.91
	2130		29.83		1930		29.91
	2230		29.80		2030		29.94
	2330		29.80		2130		29.94
3/3	0030		29.80		2230		29.94
	0130		29.77		2330		30.00
	0230		29.80	3/4	0030		29.97
	0330		29.80		0130		30.00
	0430		29.80		0230		30.03
	0530		29.80		0330		30.03
	0630		29.77		0430		30.00

"Rain in the Rain"

a poured concrete floor that is about 2 ft lower than surrounding "crawl space" area. The crawl space area ~~is~~ has no cover; it's just a gravel base.

0940 Deploy sample 094AG108CS in crawl space of southern duplex. Canister ID is 34267. Initial vacuum is ~~29~~ 30 inHg. 24-hour sample.

0950 BM returns to office to get more supplies and pick-up Claire Albertson for soil gas sampling.

1020 BM + CA depart for site.

1145 After numerous attempts to begin sampling at SG-4 determine that teflon tape needs to be replaced on sample manifold b/c ~~of~~ it is unable to hold a vacuum.

1330 Back at the site. Seem to have fixed leakage in manifold. Begin leak test at SG-4. Manifold check is ok. Begin helium leak check. Stop

1620 The manifold was still leaking. Totally re-built the manifold. Return to site to sample SG-4.

BM 3/2/09

1655 Begin manifold leak check on SG-4. Passes for 1 minute at 13 inHg. Begin helium leak check. Purge for 10 minutes at 200 ml/min.
Helium reading = ~~0 ppm~~ 150 ppm
TVH = 150 ppm
O_2 = 20.9%
CO_2 = 0.6%

1705 BM begins collecting sample 094AG109SG at SG-4. 30-minute sample for TO-15. Initial vacuum is 28 inHg. Canister ID is 11823.

Note: Vicki Nickolich comes over at yells at me why ~~the~~ am I not at her residence b/c she called Todd Blessing to tell him I should sample at 17:30. I didn't get message. There is no time to sample at her house so I set out duplicate air samples at tenant house: 094AG110IA and 094AG111IA. All the info is on their cards and will be recorded tomorrow when I pick them up.

BM 3/2/09

Rite in the Rain

3/2/09 4th + Gunbell 14-139

1810 Conduct leak check on SG-3. Manifold passes. Conduct helium leak-check

Note: Final vacuum at SG-4 was 8 in Hg.

SG-3 Helium = 0 ppm
TVH = 200 ppm
O_2 = 20.9%
CO_2 = 0.9%

1820 Begin sampling SG-3. Canister ID 22968. 30 minute sample. Initial vacuum is 30 in Hg.

1850 Retrieve sample SG-3 (Sample ID: 094AG112SG) Final vacuum is 10.5 in Hg.

1900 BM departs site

Sample Summary

Sample	Time	Canister	In Vac	Fin Vac	Location	Comment
094AG106AA	0915	4241	23 in Hg	6	AA-2	
107CS	0930	34192	26.5	5	CS-1	
108CS	0940	34267	30 in Hg	8	CS-2	
109SG	1705	11823	28	8	SG-4	
110IA	1745	5718	29	9	IA-1	
111IA	1800	34200	29	10	IA-1	dupe of 110IA
112SG	1820	22968	30	10.5	SG-3	
113AA	1830	926	30	2	AA-1	

3/3/09

14-139 4th + Gunbell 3/2/09

0835 BM arrives at 4th + Gunbell site. Review HSE plan and hazards for the day: transients, traffic, pinch points, slips

0900 Set up at SG-1. Call Todd Blessing and he'll run out to see the leak test. Will wait to start.

Note: At 1830 yesterday, deployed sampl 094AG113AA outside of Vicki Nikolaieb's House, 1720 3rd Avenue. Canister ID 926. Initial vac was 30 in Hg. 24-hour sample.

0910 Retrieve sample 106AA. Final vac is 6 in Hg

0915 Retrieve sample 107CS. Final vac is 5 in Hg.

0920 ADEC Todd Blessing + staff members come out. Run helium leak checks since manifold has been holding a 15 in Hg vacuum since 2400.

Helium = 100 ppm
TVH = 35 ppm
O_2 = 20.9%
CO_2 = 0.2%

0930 Begin sampling SG-1. 094AG114SG. Canister ID is 12042. Initial vac is 30

3/3/09

3/3/09 4th + Gentell 14-139

Also collect duplicate sample 094AG115SG. Canister ID is 34626. Initial vac is ~~listed~~ 30 in Hg. Time listed as 1000.

0940 Retrieve sample 094AG108CS from southern duplex. Final vac is 8 in Hg.

1000 Retrieve 114SG + 115SG. Final vac for 114SG is 12 in Hg. Final vac for 115SG is 11 in Hg.

1035 Set up at SG-2. Conduct manifold leak check. Holds for 1-minute. Perform helium leak check.

Helium = 0 ppm
TVH = 110 ppm
O_2 = 20.9%
CO_2 = 0.7%

~~1040~~ 1050 Begin sampling at SG-2. Sample number is 094AG116SG. Canister ID is 33632. Initial vac is 30 in Hg.

1120 Retrieve sample 116SG. Final vac is 12.5 in Hg.

~~1740~~ 1140 Depart site

1740 BM arrives at site. Retrieves samples from IA-1. Final vac of 111IA is . Final vac of 112IA is

1745 BM deploys sample 094AG117IA at IA-2 in Nickolich's residence. Canister ID is 14109. Initial vac is 24 hours

B. Mott 3/3/09

14-139 4th + Gentell 3/3/09

1820 BM retrieves sample 094AG113AA from AA-1. Final vac is .

1830 BM departs site.

Sample Summary

Sample	Time	Canister	Init Vac	Final Vac	Location	Comments
094AG114SG	0930	12042	30	12	SG-1	
115SG	1000	34626	30	11	SG-1	dup of 114SG
116SG	1050	33632	30	12.5	SG-2	
117IA	1745	14109	30		IA-2	

Note: Canister 33920 is sample 094AG118TB: trip blank

B. Mott 3/3/09

"Ride in the Rain"

3/4/09 4th + Gambell 14-139

1730 DM returns to site to retrieve sample 094AG117IA. Final vac is

Final weather observations

Date	Time	Temp	Pressure
3/4/09	0530		30.00
	0630		30.00
	0730		30.03
	0830		30.03
	0930		29.97
	1030		29.97
	1130		29.97
	1230		29.97
	1330		29.97
	1430		29.97
	1530		29.97
	1630		~~29.91~~ 29.97
	1730	19.2	~~29.85~~ 29.94

B. M[illegible]

14-139 4th + Gambell 6/12/09

1300 OASIS Ben Martich + Nate Oberlee arrive at site. Meet Mike Cupples who lets us in his north duplex and shows us the mitigation system.

1305 Set out outdoor air sample ~~094~~ 094AG121AA at duplexes at ~~IA-2.~~ ~~IA-2~~. AA-2.

1310 Set out outdoor air sample 094AG122AA at AA-1.

1315 Set out both crawl space air samples at duplexes. Sample 094AG123CS at CS-1 in north duplex and sample 094AG124CS at CS-2 in south duplex.

1320 Set out indoor air sample 094AG125IA at IA-2 in 720 3rd Ave.

~~1325~~ 1330 Set out indoor air sample 094AG126IA and 094AG127IA (duplicate) at IA-1 in 710 3rd Ave. Duplicate time is 1400.

1345 Set up at SG-3. Check manifold and it holds pressure. Conduct leak check. Purge at 200 ml/min for 10 minutes. Flood leak hood with helium. Helium concentration in hood is 75%

B. Martich 6/12/09 "Rite in the Rain"

B. MARTIEN / N. OBERLEE

6/12/09 — 4th + Gambell — 14-139

SG-3: Canister: 30835
Initial Vac: 29 "Hg
Final Vac: 6 "Hg
Helium: Ø ppm
O_2: 20.7 %
CO_2: 0.4 %
TVH: 30 ppm
Sample Time: 1400
Sample Number: 094AG128SG

1420 - SG4: Canister: 36529
Initial Vac: 29.5 "Hg
Final Vac: 6 "Hg
Helium: Ø ppm
O_2: 20.7 %
CO_2: 0.4 %
TVH: Ø ppm
Sample Time: 1440
Sample Number: 094AG128SG

SG4 - Leak Check Manifold: Held @ 25" Hg Vac.
Purge at 200 ml/min for 10 minutes
Flood Hood w/ Helium. Helium in Hood at 66.7 %

N. OBERLEE

6/12/09 — 4th + Gambell — 14-139 — 60°F / Overcast

1510 - Setup at SG1
Leak Check Manifold Held at 15" Hg
Purge @ 200 ml/min for 10 minutes.
Flood Hood w/ Helium. Helium in Hood at 63.5 %.

SG1 Primary Canister: 36341
Duplicat Canister: 34654
Primary Initial Vac: 29 "Hg
Primary Final Vac: 29 "Hg 7 "Hg
Dup. Initial Vac: 29 "Hg
Dup Final Vac: 4 "Hg
Helium: Ø ppm
O_2: 20.7 %
CO_2: 0.5 %
TVH: 45 ppm
Sample Time Primary: 1525
Sample Time Dup: 1530
Primary Sample Number: 094AG130SG
Dup. Sample Number: 094AG131SG

"Rite in the Rain"

N. OBERLEE

6/12/09 4TH & CAMBELL 14-139 65°F/OVERCAST

1540 - SETUP AT SG2

LEAK CHECK MANIFOLD: HELD AT 16" Hg

FLOOD HOOD WITH HELIUM: HELIUM AT 54%

PURGE SG2 AT 200 ML/MIN FOR 10 MIN.

SG2: CANISTER #: 25289

INITIAL VAC: 28" Hg

FINAL VAC: 5" Hg

HELIUM: 0 ppm

O_2: 20.6 %

CO_2: 0.5 %

IVH: 15 ppm

SAMPLE TIME: 1555

SAMPLE NUMBER: 094AG132SG

1640 - COMPLETE SOIL GAS SAMPLING. CLOSE WELLHEADS. CLEAN UP GEAR.

DEPART SITE - BACK TO OFFICE.

14-139 4th & Grenbell 6/13/09

1300 Ben Murdich arrives at site to retrieve samples from AA-1, AA-2, CS-1, CS-2, IA-1, IA-2.

1330 Drop off samples at office

Sample ID	Location	Canister	Initial Vac	Final Vac	Time	Comment
094AG121AA	AA-2	14012	29.5	25	1305	
122AA	AA-1	34352	29.5	25	1310	
123CS	CS-1	5622	29.5	5	1315	
124CS	CS-2	31441	29.5	4.5	1315	
125IA	IA-2	14665	29.5	10	1320	
126IA	IA-1	9579	29.5	5.5	1320	
127IA	IA-1	5755	29.5	6	1400	dup of 126IA
128SG	SG-3	30835	29	6	1400	
129SG	SG-4	36529	29.5	6	1440	
130SG	SG-1	36341	29	7	1525	
131SG	SG-1	34654	29	4	1530	dup of 130SG
132SG	SG-2	25289	28	5	1555	
133TB	Trip Blk	02499				

"Rest in the Rain"

6/15/19 4th + Cambell 14-139

Pressure Readings for June 2019 Sighting

6/12	13:30	29.80		1130	29.71
	14:30	29.80		1230	29.74
	1530	29.80		1330	29.71
	1630	29.80			
	1730	29.80			
	1830	29.83			
	1930	29.80			
	2030	29.80			
	2130	29.77			
	2230	29.77			
	2330	29.77			
6/13	0030	29.74			
	0130	29.71			
	0230	29.74			
	0330	29.74			
	0430	29.74			
	0530	29.71			
	0630	29.71			
	0730	29.71			
	0830	29.71			
	0930	29.71			
	1030	29.71			

"Rite in the Rain"

APPENDIX B

Photographs

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Photographs
4th and Gambell Vapor Intrusion

Photograph 1. Drilling soil gas monitoring point SG-1.

Photograph 2. Soil gas implant.

Photographs
4th and Gambell Vapor Intrusion

Photograph 3. Gauging depth of sand around implant.

Photograph 4. Drilling soil gas monitoring point SG-2.

Photographs
4th and Gambell Vapor Intrusion

Photograph 5. Sampling soil gas monitoring point SG-1.

Photograph 6. Soil gas monitoring point SG-2.

Photographs
4th and Gambell Vapor Intrusion

Photograph 7. Crawl space air sample in north duplex in March 2009.

Photograph 5. Indoor air sample in residence.

APPENDIX C

Building Surveys

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1710 3rd Ave

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Ben Mertich Date/Time Prepared 2/27/09

Preparer's Affiliation OASIS Phone No. _____

Purpose of Investigation VI Assessment

1. OCCUPANT:

Interviewed: Y / N

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location _____ Age of Occupants _____

2. OWNER OR LANDLORD: (Check if same as occupant ___)

Interviewed: (Y) / N

Last Name: Nikolich First Name: Vicki

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

(Residential)	School	Commercial/Multi-use
Industrial	Church	Other: _____

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	(Split Level)	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other:_____

If multiple units, how many? _____

If the property is commercial, type?

Business Type(s) _____

Does it include residences (i.e., multi-use)? Y / N If yes, how many? _____

Other characteristics:

Number of floors 1+basement Building age ~60

Is the building insulated? Y / N How air tight? Tight / Average / (Not Tight)

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

_____

_____

_____

Airflow near source

_____

_____

_____

Outdoor air infiltration

_____

_____

_____

Infiltration into air ducts

_____

_____

_____

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction:	wood frame	concrete	stone	brick
b. Basement type:	full	crawlspace	slab	other _____
c. Basement floor:	concrete	dirt	stone	other _____
d. Basement floor:	uncovered	covered	covered with _____	
e. Concrete floor:	unsealed	sealed	sealed with _____	
f. Foundation walls:	poured	block	stone	other _____
g. Foundation walls:	unsealed	sealed	sealed with paint	
h. The basement is:	wet	damp	dry	moldy
i. The basement is:	finished	unfinished	partially finished	
j. Sump present?	Y / N			
k. Water in sump?	Y / N / not applicable			

Basement/Lowest level depth below grade: 5 (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

floor drain in basement

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	Heat pump	Hot water baseboard	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other _____

The primary type of fuel used is:

Natural Gas	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: natural gas

Boiler/furnace located in:	Basement	Outdoors	Main Floor	Other _____
Air conditioning:	Central Air	Window units	Open Windows	None

Are there air distribution ducts present? (Y)/N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

_____

_____

_____

_____

7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally (Seldom) Almost Never

Level	General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)
Basement	utility, storage, some living space
1st Floor	living space
2nd Floor	
3rd Floor	
4th Floor	

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage?	Y/(N)
b. Does the garage have a separate heating unit?	Y / N / NA
c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car)	Y / N / NA Please specify_____
d. Has the building ever had a fire?	Y / N When?_____
e. Is a kerosene or unvented gas space heater present?	Y / N Where? _____
f. Is there a workshop or hobby/craft area?	Y /(N) Where & Type? _____
g. Is there smoking in the building?	Y /(N) How frequently? _____
h. Have cleaning products been used recently?	(Y)/ N When & Type? _____
i. Have cosmetic products been used recently?	(Y) N When & Type? _____

j. Has painting/staining been done in the last 6 months? Y / (N) Where & When? _____

k. Is there new carpet, drapes or other textiles? Y / (N) Where & When? _____

l. Have air fresheners been used recently? (Y) / N When & Type? _____

m. Is there a kitchen exhaust fan? (Y) / N If yes, where vented? _____

n. Is there a bathroom exhaust fan? (Y) / N If yes, where vented? _____

o. Is there a clothes dryer? (Y) / N If yes, is it vented outside? Y / N

p. Has there been a pesticide application? (Y) / N When & Type? _____

Are there odors in the building? Y / N
If yes, please describe: _____

Do any of the building occupants use solvents at work? Y / (N)
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)
Yes, use dry-cleaning infrequently (monthly or less)
Yes, work at a dry-cleaning service
(No)
Unknown

Is there a radon mitigation system for the building/structure? Y / (N) Date of Installation: _____
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: (Public Water) Drilled Well Driven Well Dug Well Other: _____

Sewage Disposal: (Public Sewer) Septic Tank Leach Field Dry Well Other: _____

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: _____

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

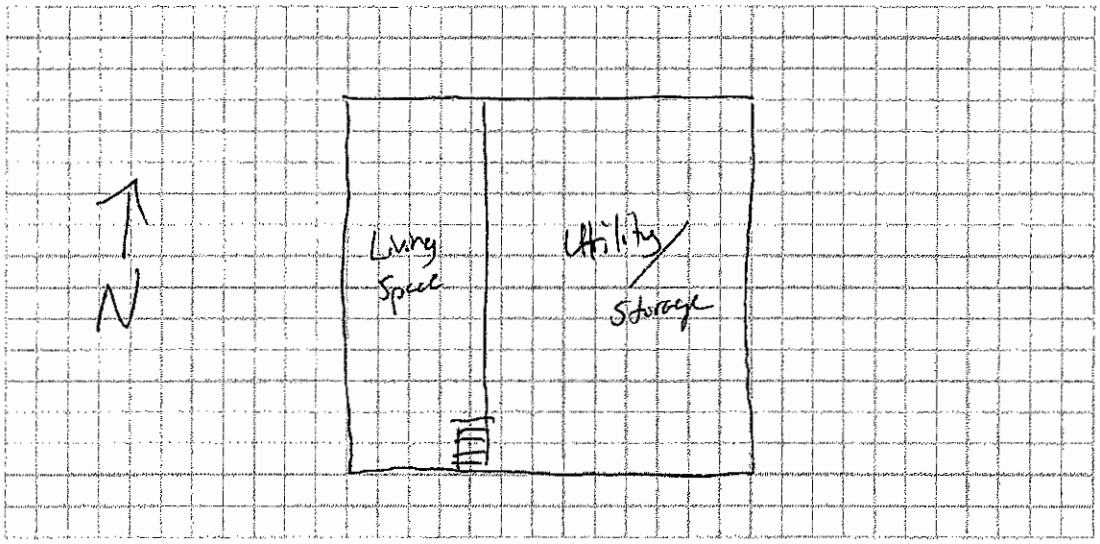
c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

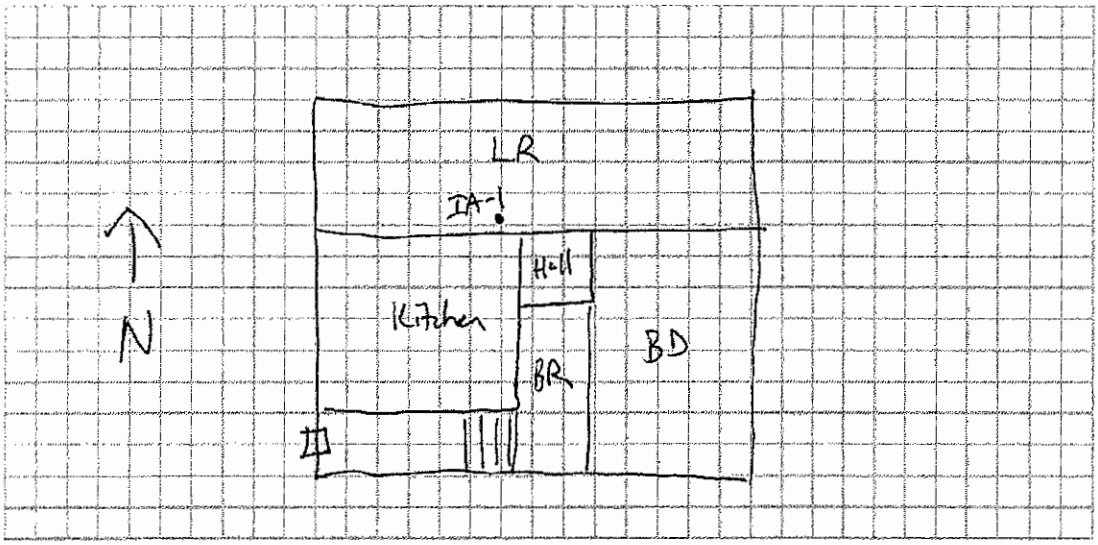
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement: Background PID reading is 200ppb



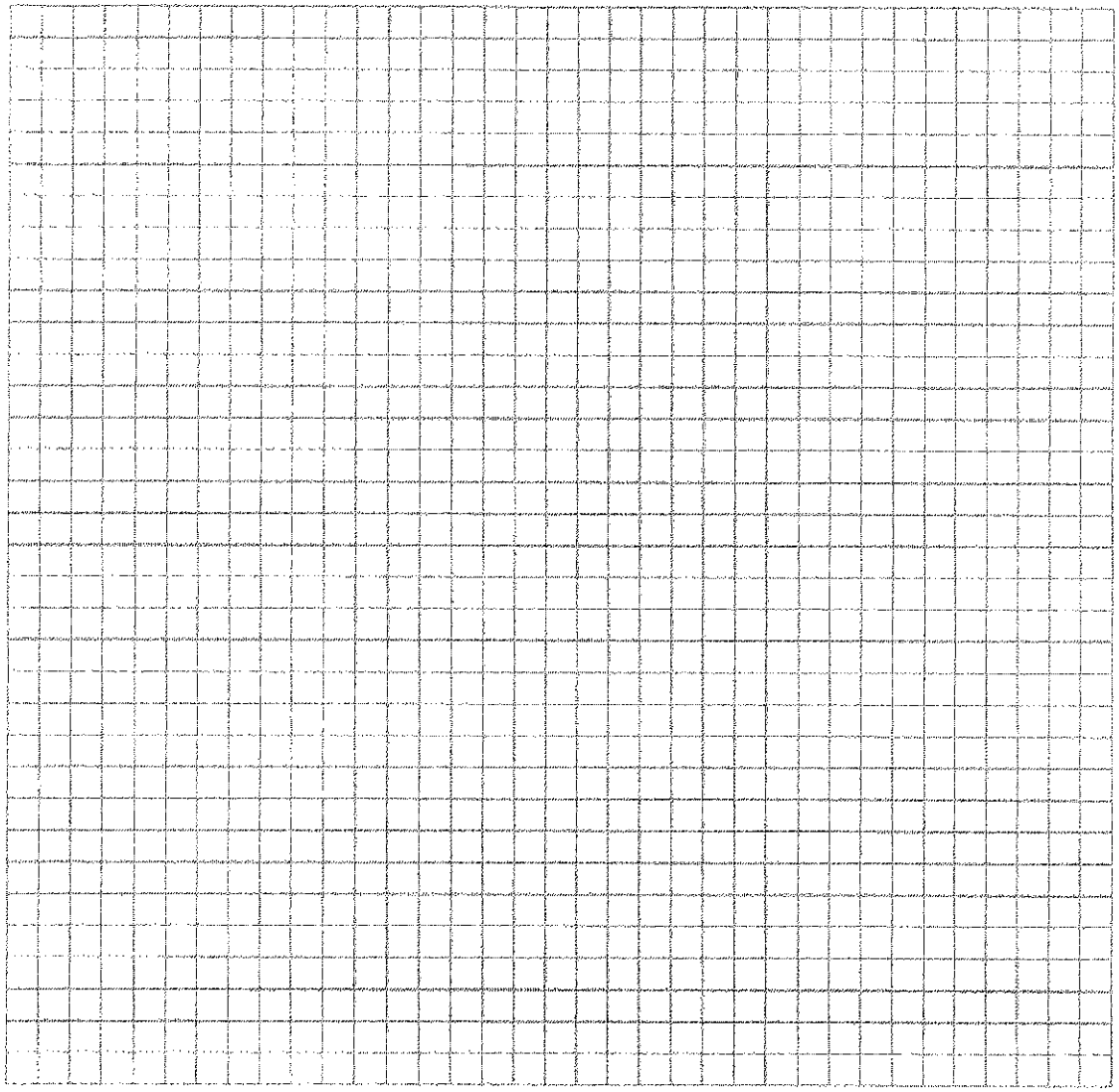
First Floor:



12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: ppb Rae

List specific products found in the residence that have the potential to affect indoor air quality.

No Solvents identified

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N

* Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D)

** Photographs of the front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

1720 & 3rd Ave

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Ben Martich Date/Time Prepared 2/27/09

Preparer's Affiliation OASIS Phone No. _____

Purpose of Investigation _____

1. OCCUPANT:

Interviewed: (Y) / N

Last Name: Nikolich First Name: Vick.

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location _____ Age of Occupants _____

2. OWNER OR LANDLORD: (Check if same as occupant ___)

Interviewed: Y / N

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

(Residential)	School	Commercial/Multi-use
Industrial	Church	Other: _____

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other:_____

If multiple units, how many? _____

If the property is commercial, type?

Business Type(s) _____

Does it include residences (i.e., multi-use)? Y / N If yes, how many? _____

Other characteristics:

Number of floors 1 + basement Building age ~60 years

Is the building insulated? Y / N How air tight? Tight / Average / Not Tight

4. **AIRFLOW**

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

_____

_____

_____

Airflow near source

_____

_____

_____

Outdoor air infiltration

_____

_____

_____

Infiltration into air ducts

_____

_____

_____

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction:	wood frame	concrete	stone	brick
b. Basement type:	full	crawlspace	slab	other _____
c. Basement floor:	concrete	dirt	stone	other _____
d. Basement floor:	uncovered	covered	covered with carpeting	
e. Concrete floor:	unsealed	sealed	sealed with paint	
f. Foundation walls:	poured	block	stone	other _____
g. Foundation walls:	unsealed	sealed	sealed with _____	
h. The basement is:	wet	damp	dry	moldy
i. The basement is:	finished	unfinished	partially finished	
j. Sump present?	Y / N			
k. Water in sump?	Y / N / not applicable			

Basement/Lowest level depth below grade: 5 (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

floor drain in kitchen

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	Heat pump	Hot water baseboard	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other _____

The primary type of fuel used is:

Natural Gas	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: ?

Boiler/furnace located in:	Basement	Outdoors	Main Floor	Other None
Air conditioning:	Central Air	Window units	Open Windows	None

Are there air distribution ducts present? Y / (N)

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

_____

_____

_____

_____

7. OCCUPANCY

Is basement/lowest level occupied? Full-time (Occasionally) Seldom Almost Never

Level	General Use of Each Floor (e.g., ~~family room, bedroom~~, laundry, workshop, storage)
Basement	storage, shop room, kitchen, [redacted]
1st Floor	living space
2nd Floor	
3rd Floor	
4th Floor	

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage?	Y / (N)	
b. Does the garage have a separate heating unit?	Y / N / NA	
c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car)	Y / N / NA	Please specify_____
d. Has the building ever had a fire?	Y / N	When?_____
e. Is a kerosene or unvented gas space heater present?	Y / N	Where?_____
f. Is there a workshop or hobby/craft area?	(Y) / N	Where & Type? NE corner of basement
g. Is there smoking in the building?	Y / (N)	How frequently?_____
h. Have cleaning products been used recently?	(Y) / N	When & Type?_____
i. Have cosmetic products been used recently?	(Y) / N	When & Type?_____

j. Has painting/staining been done in the last 6 months? Y / (N) Where & When? _____

k. Is there new carpet, drapes or other textiles? Y / (N) Where & When? _____

l. Have air fresheners been used recently? (Y) / N When & Type? _____

m. Is there a kitchen exhaust fan? (Y) / N If yes, where vented? _____

n. Is there a bathroom exhaust fan? (Y) / N If yes, where vented? _____

o. Is there a clothes dryer? (Y) / N If yes, is it vented outside? Y / N

p. Has there been a pesticide application? Y / N When & Type? _____

Are there odors in the building? Y / N
If yes, please describe: _____

Do any of the building occupants use solvents at work? Y / N
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly) (No)
Yes, use dry-cleaning infrequently (monthly or less) Unknown
Yes, work at a dry-cleaning service

Is there a radon mitigation system for the building/structure? Y / N Date of Installation: _____
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply:	(Public Water)	Drilled Well	Driven Well	Dug Well	Other: _____
Sewage Disposal:	(Public Sewer)	Septic Tank	Leach Field	Dry Well	Other: _____

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: _____

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

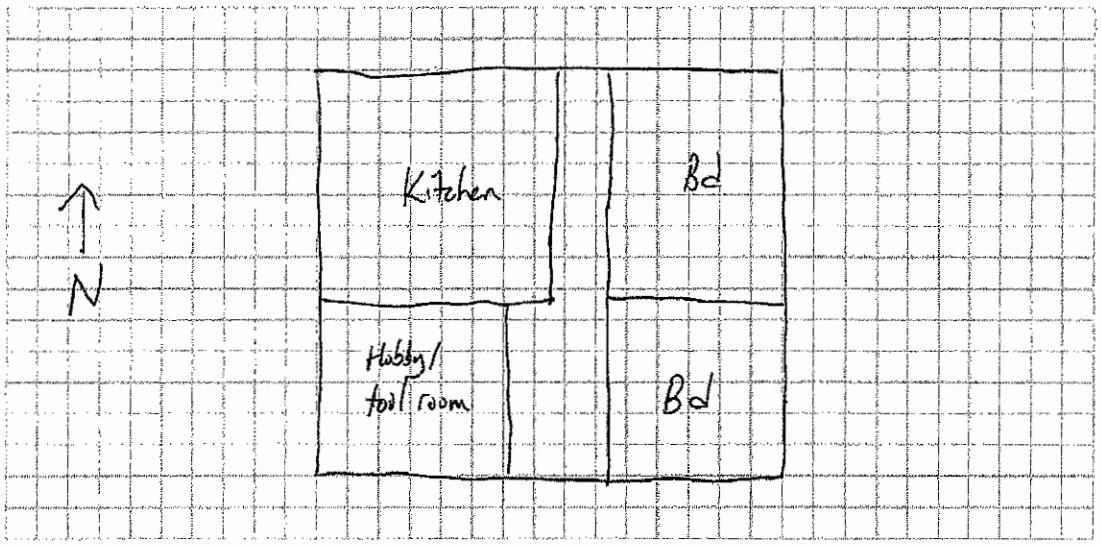
c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

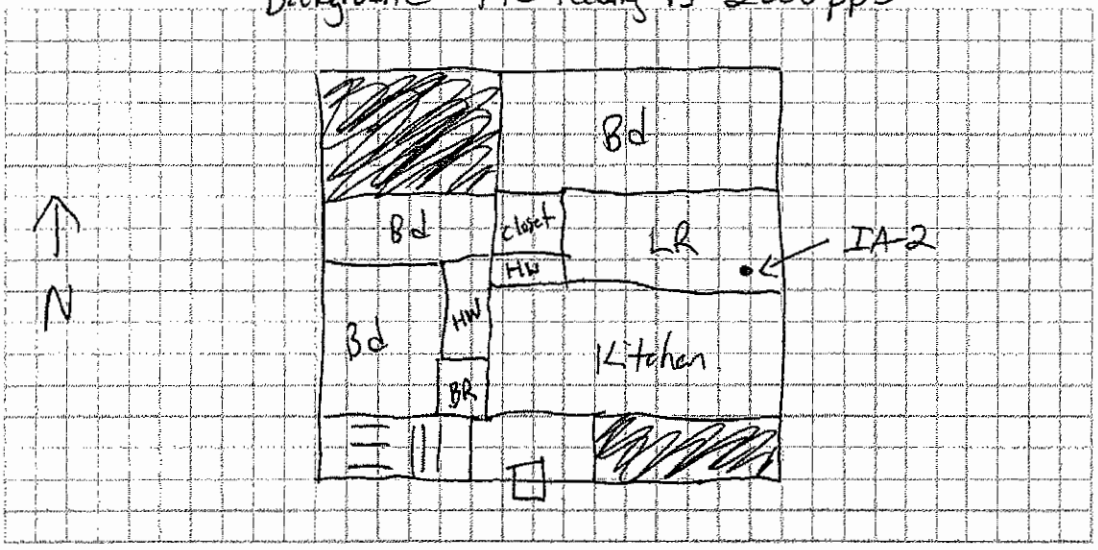
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement: Background PID reading is 1300 ppb



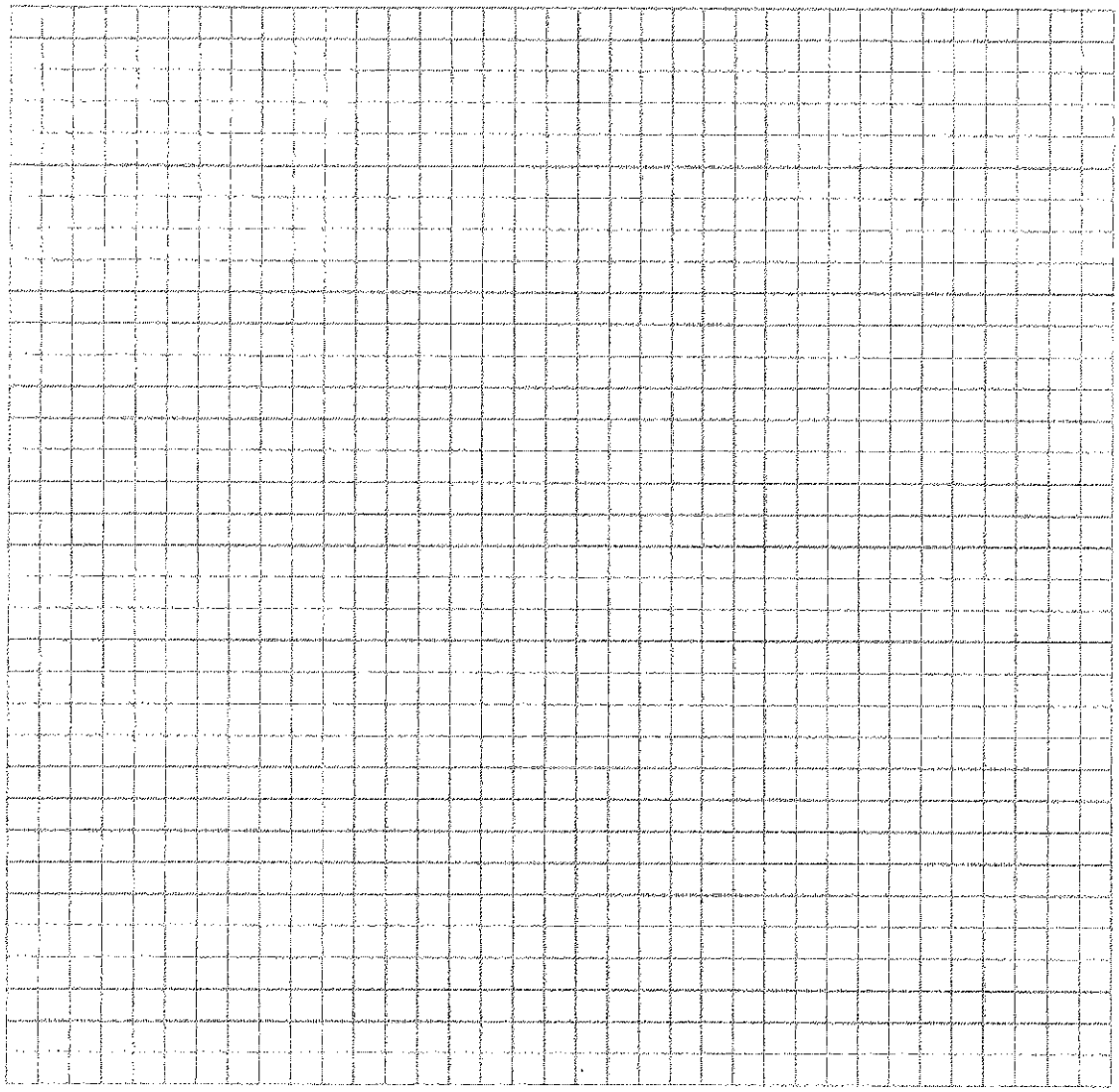
First Floor: Background PID reading is 2000 ppb



12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: ppb Rae

List specific products found in the residence that have the potential to affect indoor air quality.

No solvents identified

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N

* Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D)
** Photographs of the front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

APPENDIX D

Laboratory Analytical Reports

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

3/25/2009
Mr. Ben Martich
Oasis Environmental, Inc.
825 W. 8th Avenue
Suite 200
Anchorage AK 99501

Project Name: 4th and Gambell
Project #:
Workorder #: 0903220A

Dear Mr. Ben Martich

The following report includes the data for the above referenced project for sample(s) received on 3/9/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for you air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kelly Buettner
Project Manager

WORK ORDER #: 0903220A

Work Order Summary

CLIENT:	Mr. Ben Martich Oasis Environmental, Inc. 825 W. 8th Avenue Suite 200 Anchorage, AK 99501	**BILL TO:**	Mr. Ben Martich Oasis Environmental, Inc. 825 W. 8th Avenue Suite 200 Anchorage, AK 99501
PHONE:	907-258-4880	**P.O. #**	14-139
FAX:		**PROJECT #**	4th and Gambell
DATE RECEIVED:	03/09/2009	**CONTACT:**	Kelly Buettner
DATE COMPLETED:	03/24/2009		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	094AG106AA	Modified TO-15	0.6psi	5 psi
02A	094AG107CS	Modified TO-15	0.3psi	5 psi
03A	094AG108CS	Modified TO-15	1.8 "Hg	5 psi
05A	094AG110lA	Modified TO-15	6.6 "Hg	5 psi
05AA	094AG110lA Lab Duplicate	Modified TO-15	6.6 "Hg	5 psi
06A	094AG111IA	Modified TO-15	6.2 "Hg	5 psi
08A	094AG113AA	Modified TO-15	1.2psi	5 psi
12A	094AG117lA	Modified TO-15	5.4 "Hg	5 psi
13A	094AG118TB	Modified TO-15	25.2 "Hg	5 psi
14A	Lab Blank	Modified TO-15	NA	NA
15A	CCV	Modified TO-15	NA	NA
16A	LCS	Modified TO-15	NA	NA

CERTIFIED BY: _____ DATE: 03/25/09

Laboratory Director

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
Oasis Environmental, Inc.
Workorder# 0903220A

Eight 6 Liter Summa Canister (100% Certified) samples were received on March 09, 2009. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 1.0 liter of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	*TO-15*	*ATL Modifications*
ICAL %RSD acceptance criteria	+- 30% RSD with 2 compounds allowed out to < 40% RSD	30% RSD with 4 compounds allowed out to < 40% RSD
Daily Calibration	+- 30% Difference	</= 30% Difference with four allowed out up to </=40%.; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The trip blank sample 094AG118TB has reportable levels of target compounds present.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the reporting limit.
UJ- Non-detected compound associated with low bias in the CCV
N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: 094AG106AA

Lab ID#: 0903220A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.13	0.62	0.64	3.1
Chloromethane	0.13	0.47	0.27	0.98
Freon 11	0.13	0.28	0.72	1.6
Ethanol	0.64	0.95	1.2	1.8
Acetone	0.64	6.1	1.5	14
Hexane	0.13	0.17	0.45	0.59
2-Butanone (Methyl Ethyl Ketone)	0.13	1.6	0.38	4.6
Benzene	0.13	0.63	0.41	2.0
Heptane	0.13	0.13	0.53	0.54
Toluene	0.13	1.2	0.49	4.6
Tetrachloroethene	0.13	0.14	0.88	0.95
Ethyl Benzene	0.13	0.14	0.56	0.59
m,p-Xylene	0.13	0.49	0.56	2.1
o-Xylene	0.13	0.17	0.56	0.73
Styrene	0.13	0.13	0.55	0.56

Client Sample ID: 094AG107CS

Lab ID#: 0903220A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.13	1.3	0.65	6.6
Chloromethane	0.13	0.59	0.27	1.2
Freon 11	0.13	0.32	0.74	1.8
Ethanol	0.66	100 E	1.2	200 E
Acetone	0.66	5.9	1.6	14
2-Propanol	0.66	15	1.6	37
Hexane	0.13	2.2	0.46	7.8
2-Butanone (Methyl Ethyl Ketone)	0.13	0.60	0.39	1.8
Cyclohexane	0.13	2.4	0.45	8.4
Benzene	0.13	1.1	0.42	3.6
Heptane	0.13	1.9	0.54	7.9
Toluene	0.13	2.2	0.49	8.3
Tetrachloroethene	0.13	25	0.89	170
Ethyl Benzene	0.13	0.25	0.57	1.1
m,p-Xylene	0.13	0.81	0.57	3.5
o-Xylene	0.13	0.30	0.57	1.3
Styrene	0.13	0.15	0.56	0.64

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: 094AG108CS

Lab ID#: 0903220A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.28	0.54	1.4	2.7
Chloromethane	0.28	1.2	0.59	2.4
1,3-Butadiene	0.28	0.57	0.63	1.3
Freon 11	0.28	0.31	1.6	1.8
Ethanol	1.4	550 E	2.7	1000 E
Acetone	1.4	50	3.4	120
2-Propanol	1.4	100	3.5	250
2-Butanone (Methyl Ethyl Ketone)	0.28	1.3	0.84	3.8
Benzene	0.28	1.2	0.91	3.8
Toluene	0.28	2.1	1.1	8.0
Tetrachloroethene	0.28	2.1	1.9	14
m,p-Xylene	0.28	0.78	1.2	3.4

Client Sample ID: 094AG1101A

Lab ID#: 0903220A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.63	0.85	3.1
Chloromethane	0.17	0.44	0.36	0.91
Freon 11	0.17	0.26	0.97	1.5
Ethanol	0.86	210 E	1.6	400 E
Acetone	0.86	17	2.0	40
2-Propanol	0.86	2.0	2.1	4.9
Hexane	0.17	1.4	0.61	5.0
2-Butanone (Methyl Ethyl Ketone)	0.17	2.3	0.51	6.9
Cyclohexane	0.17	0.75	0.59	2.6
Benzene	0.17	3.2	0.55	10
Heptane	0.17	0.96	0.70	3.9
Toluene	0.17	9.7	0.65	36
Tetrachloroethene	0.17	1.2	1.2	8.0
Ethyl Benzene	0.17	1.3	0.75	5.7
m,p-Xylene	0.17	5.3	0.75	23
o-Xylene	0.17	1.8	0.75	8.0
Propylbenzene	0.17	0.20	0.84	0.96
4-Ethyltoluene	0.17	0.68	0.84	3.3
1,3,5-Trimethylbenzene	0.17	0.21	0.84	1.0
1,2,4-Trimethylbenzene	0.17	0.71	0.84	3.5

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: 094AG110IA

Lab ID#: 0903220A-05A

1,4-Dichlorobenzene	0.17	0.77	1.0	4.6

Client Sample ID: 094AG110IA Lab Duplicate

Lab ID#: 0903220A-05AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.53	0.85	2.6
Chloromethane	0.17	0.40	0.36	0.84
Freon 11	0.17	0.24	0.97	1.3
Ethanol	0.86	180 E	1.6	340 E
Acetone	0.86	15	2.0	35
2-Propanol	0.86	1.7	2.1	4.2
Hexane	0.17	1.2	0.61	4.4
2-Butanone (Methyl Ethyl Ketone)	0.17	2.2	0.51	6.4
Cyclohexane	0.17	0.67	0.59	2.3
Benzene	0.17	2.8	0.55	8.9
Heptane	0.17	0.78	0.70	3.2
Toluene	0.17	8.3	0.65	31
Tetrachloroethene	0.17	0.92	1.2	6.3
Ethyl Benzene	0.17	1.1	0.75	4.9
m,p-Xylene	0.17	4.5	0.75	19
o-Xylene	0.17	1.5	0.75	6.7
4-Ethyltoluene	0.17	0.54	0.84	2.6
1,3,5-Trimethylbenzene	0.17	0.17	0.84	0.86
1,2,4-Trimethylbenzene	0.17	0.60	0.84	3.0
1,4-Dichlorobenzene	0.17	0.61	1.0	3.7

Client Sample ID: 094AG111IA

Lab ID#: 0903220A-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.62	0.84	3.1
Chloromethane	0.17	0.61	0.35	1.3
Freon 11	0.17	0.27	0.95	1.5
Ethanol	0.84	170 E	1.6	320 E
Acetone	0.84	7.4	2.0	18
2-Propanol	0.84	2.1	2.1	5.2
Hexane	0.17	1.5	0.60	5.3

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: 094AG1111A

Lab ID#: 0903220A-06A

2-Butanone (Methyl Ethyl Ketone)	0.17	1.3	0.50	3.7
Cyclohexane	0.17	0.79	0.58	2.7
Benzene	0.17	3.3	0.54	11
Heptane	0.17	0.97	0.69	4.0
Toluene	0.17	10	0.64	39
Tetrachloroethene	0.17	1.2	1.1	8.2
Ethyl Benzene	0.17	1.4	0.73	6.1
m,p-Xylene	0.17	5.5	0.73	24
o-Xylene	0.17	2.0	0.73	8.6
Styrene	0.17	0.21	0.72	0.89
Propylbenzene	0.17	0.20	0.83	1.0
4-Ethyltoluene	0.17	0.79	0.83	3.9
1,3,5-Trimethylbenzene	0.17	0.28	0.83	1.4
1,2,4-Trimethylbenzene	0.17	0.96	0.83	4.7
1,4-Dichlorobenzene	0.17	0.79	1.0	4.8

Client Sample ID: 094AG113AA

Lab ID#: 0903220A-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.12	0.68	0.61	3.4
Chloromethane	0.12	0.65	0.26	1.3
Freon 11	0.12	0.31	0.70	1.7
Ethanol	0.62	0.79	1.2	1.5
Acetone	0.62	2.0	1.5	4.9
Hexane	0.12	0.17	0.44	0.59
Benzene	0.12	0.67	0.40	2.1
Toluene	0.12	0.97	0.47	3.7
m,p-Xylene	0.12	0.23	0.54	0.99

Client Sample ID: 094AG117IA

Lab ID#: 0903220A-12A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.83	0.81	4.1
Chloromethane	0.16	0.55	0.34	1.1
Freon 11	0.16	0.29	0.92	1.6
Ethanol	0.82	220 E	1.5	410 E

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: 094AG1171A

Lab ID#: 0903220A-12A

Acetone	0.82	130 E	1.9	310 E
2-Propanol	0.82	3.5	2.0	8.5
Hexane	0.16	0.63	0.57	2.2
2-Butanone (Methyl Ethyl Ketone)	0.16	9.7	0.48	29
Tetrahydrofuran	0.82	2.4	2.4	7.2
Cyclohexane	0.16	0.35	0.56	1.2
Benzene	0.16	0.82	0.52	2.6
Heptane	0.16	0.68	0.67	2.8
Toluene	0.16	3.8	0.61	14
Tetrachloroethene	0.16	8.6	1.1	58
Chlorobenzene	0.16	0.33	0.75	1.5
Ethyl Benzene	0.16	0.39	0.71	1.7
m,p-Xylene	0.16	1.4	0.71	6.3
o-Xylene	0.16	0.48	0.71	2.1
Styrene	0.16	0.23	0.69	0.97
1,2,4-Trimethylbenzene	0.16	0.20	0.80	1.0
1,4-Dichlorobenzene	0.16	3.9	0.98	23

Client Sample ID: 094AG118TB

Lab ID#: 0903220A-13A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Chloromethane	0.10	0.10	0.21	0.21
Ethanol	0.50	3.0	0.94	5.7
Acetone	0.50	2.3	1.2	5.5
2-Propanol	0.50	0.66	1.2	1.6
Methylene Chloride	0.20	0.22	0.69	0.77
Hexane	0.10	0.33	0.35	1.2
2-Butanone (Methyl Ethyl Ketone)	0.10	0.70	0.29	2.0
Cyclohexane	0.10	0.13	0.34	0.45
Benzene	0.10	0.29	0.32	0.92
Heptane	0.10	0.23	0.41	0.96
Toluene	0.10	1.7	0.38	6.2
Ethyl Benzene	0.10	0.16	0.43	0.70
m,p-Xylene	0.10	0.41	0.43	1.8
o-Xylene	0.10	0.16	0.43	0.72

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG106AA

Lab ID#: 0903220A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**t032211**	**Date of Collection:**	**3/2/09 9:15:00 AM**
Dil. Factor:	**1.29**	**Date of Analysis:**	**3/22/09 08:23 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.13	0.62	0.64	3.1
Freon 114	0.13	Not Detected	0.90	Not Detected
Chloromethane	0.13	0.47	0.27	0.98
Vinyl Chloride	0.13	Not Detected	0.33	Not Detected
1,3-Butadiene	0.13	Not Detected	0.28	Not Detected
Bromomethane	0.13	Not Detected	0.50	Not Detected
Chloroethane	0.13	Not Detected	0.34	Not Detected
Freon 11	0.13	0.28	0.72	1.6
Ethanol	0.64	0.95	1.2	1.8
Freon 113	0.13	Not Detected	0.99	Not Detected
1,1-Dichloroethene	0.13	Not Detected	0.51	Not Detected
Acetone	0.64	6.1	1.5	14
2-Propanol	0.64	Not Detected	1.6	Not Detected
Carbon Disulfide	0.64	Not Detected	2.0	Not Detected
Methylene Chloride	0.26	Not Detected	0.90	Not Detected
Methyl tert-butyl ether	0.13	Not Detected	0.46	Not Detected
trans-1,2-Dichloroethene	0.13	Not Detected	0.51	Not Detected
Hexane	0.13	0.17	0.45	0.59
1,1-Dichloroethane	0.13	Not Detected	0.52	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.13	1.6	0.38	4.6
cis-1,2-Dichloroethene	0.13	Not Detected	0.51	Not Detected
Tetrahydrofuran	0.64	Not Detected	1.9	Not Detected
Chloroform	0.13	Not Detected	0.63	Not Detected
1,1,1-Trichloroethane	0.13	Not Detected	0.70	Not Detected
Cyclohexane	0.13	Not Detected	0.44	Not Detected
Carbon Tetrachloride	0.13	Not Detected	0.81	Not Detected
Benzene	0.13	0.63	0.41	2.0
1,2-Dichloroethane	0.13	Not Detected	0.52	Not Detected
Heptane	0.13	0.13	0.53	0.54
Trichloroethene	0.13	Not Detected	0.69	Not Detected
1,2-Dichloropropane	0.13	Not Detected	0.60	Not Detected
1,4-Dioxane	0.13	Not Detected	0.46	Not Detected
Bromodichloromethane	0.13	Not Detected	0.86	Not Detected
cis-1,3-Dichloropropene	0.13	Not Detected	0.58	Not Detected
4-Methyl-2-pentanone	0.13	Not Detected	0.53	Not Detected
Toluene	0.13	1.2	0.49	4.6
trans-1,3-Dichloropropene	0.13	Not Detected	0.58	Not Detected
1,1,2-Trichloroethane	0.13	Not Detected	0.70	Not Detected
Tetrachloroethene	0.13	0.14	0.88	0.95

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG106AA

Lab ID#: 0903220A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**t032211**	**Date of Collection: 3/2/09 9:15:00 AM**	
Dil. Factor:	**1.29**	**Date of Analysis: 3/22/09 08:23 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Hexanone	0.64	Not Detected	2.6	Not Detected
Dibromochloromethane	0.13	Not Detected	1.1	Not Detected
1,2-Dibromoethane (EDB)	0.13	Not Detected	0.99	Not Detected
Chlorobenzene	0.13	Not Detected	0.59	Not Detected
Ethyl Benzene	0.13	0.14	0.56	0.59
m,p-Xylene	0.13	0.49	0.56	2.1
o-Xylene	0.13	0.17	0.56	0.73
Styrene	0.13	0.13	0.55	0.56
Bromoform	0.13	Not Detected	1.3	Not Detected
Cumene	0.13	Not Detected	0.63	Not Detected
1,1,2,2-Tetrachloroethane	0.13	Not Detected	0.88	Not Detected
Propylbenzene	0.13	Not Detected	0.63	Not Detected
4-Ethyltoluene	0.13	Not Detected	0.63	Not Detected
1,3,5-Trimethylbenzene	0.13	Not Detected	0.63	Not Detected
1,2,4-Trimethylbenzene	0.13	Not Detected	0.63	Not Detected
1,3-Dichlorobenzene	0.13	Not Detected	0.78	Not Detected
1,4-Dichlorobenzene	0.13	Not Detected	0.78	Not Detected
alpha-Chlorotoluene	0.13	Not Detected	0.67	Not Detected
1,2-Dichlorobenzene	0.13	Not Detected	0.78	Not Detected
1,2,4-Trichlorobenzene	0.64	Not Detected	4.8	Not Detected
Hexachlorobutadiene	0.64	Not Detected	6.9	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	88	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG107CS

Lab ID#: 0903220A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**t032212**	**Date of Collection: 3/2/09 9:30:00 AM**	
Dil. Factor:	**1.31**	**Date of Analysis: 3/22/09 09:28 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.13	1.3	0.65	6.6
Freon 114	0.13	Not Detected	0.92	Not Detected
Chloromethane	0.13	0.59	0.27	1.2
Vinyl Chloride	0.13	Not Detected	0.33	Not Detected
1,3-Butadiene	0.13	Not Detected	0.29	Not Detected
Bromomethane	0.13	Not Detected	0.51	Not Detected
Chloroethane	0.13	Not Detected	0.34	Not Detected
Freon 11	0.13	0.32	0.74	1.8
Ethanol	0.66	100 E	1.2	200 E
Freon 113	0.13	Not Detected	1.0	Not Detected
1,1-Dichloroethene	0.13	Not Detected	0.52	Not Detected
Acetone	0.66	5.9	1.6	14
2-Propanol	0.66	15	1.6	37
Carbon Disulfide	0.66	Not Detected	2.0	Not Detected
Methylene Chloride	0.26	Not Detected	0.91	Not Detected
Methyl tert-butyl ether	0.13	Not Detected	0.47	Not Detected
trans-1,2-Dichloroethene	0.13	Not Detected	0.52	Not Detected
Hexane	0.13	2.2	0.46	7.8
1,1-Dichloroethane	0.13	Not Detected	0.53	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.13	0.60	0.39	1.8
cis-1,2-Dichloroethene	0.13	Not Detected	0.52	Not Detected
Tetrahydrofuran	0.66	Not Detected	1.9	Not Detected
Chloroform	0.13	Not Detected	0.64	Not Detected
1,1,1-Trichloroethane	0.13	Not Detected	0.71	Not Detected
Cyclohexane	0.13	2.4	0.45	8.4
Carbon Tetrachloride	0.13	Not Detected	0.82	Not Detected
Benzene	0.13	1.1	0.42	3.6
1,2-Dichloroethane	0.13	Not Detected	0.53	Not Detected
Heptane	0.13	1.9	0.54	7.9
Trichloroethene	0.13	Not Detected	0.70	Not Detected
1,2-Dichloropropane	0.13	Not Detected	0.60	Not Detected
1,4-Dioxane	0.13	Not Detected	0.47	Not Detected
Bromodichloromethane	0.13	Not Detected	0.88	Not Detected
cis-1,3-Dichloropropene	0.13	Not Detected	0.59	Not Detected
4-Methyl-2-pentanone	0.13	Not Detected	0.54	Not Detected
Toluene	0.13	2.2	0.49	8.3
trans-1,3-Dichloropropene	0.13	Not Detected	0.59	Not Detected
1,1,2-Trichloroethane	0.13	Not Detected	0.71	Not Detected
Tetrachloroethene	0.13	25	0.89	170

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG107CS

Lab ID#: 0903220A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**t032212**	**Date of Collection: 3/2/09 9:30:00 AM**	
Dil. Factor:	**1.31**	**Date of Analysis: 3/22/09 09:28 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Hexanone	0.66	Not Detected	2.7	Not Detected
Dibromochloromethane	0.13	Not Detected	1.1	Not Detected
1,2-Dibromoethane (EDB)	0.13	Not Detected	1.0	Not Detected
Chlorobenzene	0.13	Not Detected	0.60	Not Detected
Ethyl Benzene	0.13	0.25	0.57	1.1
m,p-Xylene	0.13	0.81	0.57	3.5
o-Xylene	0.13	0.30	0.57	1.3
Styrene	0.13	0.15	0.56	0.64
Bromoform	0.13	Not Detected	1.4	Not Detected
Cumene	0.13	Not Detected	0.64	Not Detected
1,1,2,2-Tetrachloroethane	0.13	Not Detected	0.90	Not Detected
Propylbenzene	0.13	Not Detected	0.64	Not Detected
4-Ethyltoluene	0.13	Not Detected	0.64	Not Detected
1,3,5-Trimethylbenzene	0.13	Not Detected	0.64	Not Detected
1,2,4-Trimethylbenzene	0.13	Not Detected	0.64	Not Detected
1,3-Dichlorobenzene	0.13	Not Detected	0.79	Not Detected
1,4-Dichlorobenzene	0.13	Not Detected	0.79	Not Detected
alpha-Chlorotoluene	0.13	Not Detected	0.68	Not Detected
1,2-Dichlorobenzene	0.13	Not Detected	0.79	Not Detected
1,2,4-Trichlorobenzene	0.66	Not Detected	4.9	Not Detected
Hexachlorobutadiene	0.66	Not Detected	7.0	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	88	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG108CS

Lab ID#: 0903220A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**t032213**	**Date of Collection: 3/2/09 9:40:00 AM**	
Dil. Factor:	**2.85**	**Date of Analysis: 3/22/09 10:05 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.28	0.54	1.4	2.7
Freon 114	0.28	Not Detected	2.0	Not Detected
Chloromethane	0.28	1.2	0.59	2.4
Vinyl Chloride	0.28	Not Detected	0.73	Not Detected
1,3-Butadiene	0.28	0.57	0.63	1.3
Bromomethane	0.28	Not Detected	1.1	Not Detected
Chloroethane	0.28	Not Detected	0.75	Not Detected
Freon 11	0.28	0.31	1.6	1.8
Ethanol	1.4	550 E	2.7	1000 E
Freon 113	0.28	Not Detected	2.2	Not Detected
1,1-Dichloroethene	0.28	Not Detected	1.1	Not Detected
Acetone	1.4	50	3.4	120
2-Propanol	1.4	100	3.5	250
Carbon Disulfide	1.4	Not Detected	4.4	Not Detected
Methylene Chloride	0.57	Not Detected	2.0	Not Detected
Methyl tert-butyl ether	0.28	Not Detected	1.0	Not Detected
trans-1,2-Dichloroethene	0.28	Not Detected	1.1	Not Detected
Hexane	0.28	Not Detected	1.0	Not Detected
1,1-Dichloroethane	0.28	Not Detected	1.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.28	1.3	0.84	3.8
cis-1,2-Dichloroethene	0.28	Not Detected	1.1	Not Detected
Tetrahydrofuran	1.4	Not Detected	4.2	Not Detected
Chloroform	0.28	Not Detected	1.4	Not Detected
1,1,1-Trichloroethane	0.28	Not Detected	1.6	Not Detected
Cyclohexane	0.28	Not Detected	0.98	Not Detected
Carbon Tetrachloride	0.28	Not Detected	1.8	Not Detected
Benzene	0.28	1.2	0.91	3.8
1,2-Dichloroethane	0.28	Not Detected	1.2	Not Detected
Heptane	0.28	Not Detected	1.2	Not Detected
Trichloroethene	0.28	Not Detected	1.5	Not Detected
1,2-Dichloropropane	0.28	Not Detected	1.3	Not Detected
1,4-Dioxane	0.28	Not Detected	1.0	Not Detected
Bromodichloromethane	0.28	Not Detected	1.9	Not Detected
cis-1,3-Dichloropropene	0.28	Not Detected	1.3	Not Detected
4-Methyl-2-pentanone	0.28	Not Detected	1.2	Not Detected
Toluene	0.28	2.1	1.1	8.0
trans-1,3-Dichloropropene	0.28	Not Detected	1.3	Not Detected
1,1,2-Trichloroethane	0.28	Not Detected	1.6	Not Detected
Tetrachloroethene	0.28	2.1	1.9	14

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG108CS

Lab ID#: 0903220A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**t032213**	**Date of Collection: 3/2/09 9:40:00 AM**	
Dil. Factor:	**2.85**	**Date of Analysis: 3/22/09 10:05 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Hexanone	1.4	Not Detected	5.8	Not Detected
Dibromochloromethane	0.28	Not Detected	2.4	Not Detected
1,2-Dibromoethane (EDB)	0.28	Not Detected	2.2	Not Detected
Chlorobenzene	0.28	Not Detected	1.3	Not Detected
Ethyl Benzene	0.28	Not Detected	1.2	Not Detected
m,p-Xylene	0.28	0.78	1.2	3.4
o-Xylene	0.28	Not Detected	1.2	Not Detected
Styrene	0.28	Not Detected	1.2	Not Detected
Bromoform	0.28	Not Detected	2.9	Not Detected
Cumene	0.28	Not Detected	1.4	Not Detected
1,1,2,2-Tetrachloroethane	0.28	Not Detected	2.0	Not Detected
Propylbenzene	0.28	Not Detected	1.4	Not Detected
4-Ethyltoluene	0.28	Not Detected	1.4	Not Detected
1,3,5-Trimethylbenzene	0.28	Not Detected	1.4	Not Detected
1,2,4-Trimethylbenzene	0.28	Not Detected	1.4	Not Detected
1,3-Dichlorobenzene	0.28	Not Detected	1.7	Not Detected
1,4-Dichlorobenzene	0.28	Not Detected	1.7	Not Detected
alpha-Chlorotoluene	0.28	Not Detected	1.5	Not Detected
1,2-Dichlorobenzene	0.28	Not Detected	1.7	Not Detected
1,2,4-Trichlorobenzene	1.4	Not Detected	10	Not Detected
Hexachlorobutadiene	1.4	Not Detected	15	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	84	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG1101A

Lab ID#: 0903220A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**t032214**	**Date of Collection: 3/2/09 5:45:00 PM**	
Dil. Factor:	**1.72**	**Date of Analysis: 3/23/09 12:11 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.63	0.85	3.1
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.17	0.44	0.36	0.91
Vinyl Chloride	0.17	Not Detected	0.44	Not Detected
1,3-Butadiene	0.17	Not Detected	0.38	Not Detected
Bromomethane	0.17	Not Detected	0.67	Not Detected
Chloroethane	0.17	Not Detected	0.45	Not Detected
Freon 11	0.17	0.26	0.97	1.5
Ethanol	0.86	210 E	1.6	400 E
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Acetone	0.86	17	2.0	40
2-Propanol	0.86	2.0	2.1	4.9
Carbon Disulfide	0.86	Not Detected	2.7	Not Detected
Methylene Chloride	0.34	Not Detected	1.2	Not Detected
Methyl tert-butyl ether	0.17	Not Detected	0.62	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Hexane	0.17	1.4	0.61	5.0
1,1-Dichloroethane	0.17	Not Detected	0.70	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.17	2.3	0.51	6.9
cis-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Tetrahydrofuran	0.86	Not Detected	2.5	Not Detected
Chloroform	0.17	Not Detected	0.84	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.94	Not Detected
Cyclohexane	0.17	0.75	0.59	2.6
Carbon Tetrachloride	0.17	Not Detected	1.1	Not Detected
Benzene	0.17	3.2	0.55	10
1,2-Dichloroethane	0.17	Not Detected	0.70	Not Detected
Heptane	0.17	0.96	0.70	3.9
Trichloroethene	0.17	Not Detected	0.92	Not Detected
1,2-Dichloropropane	0.17	Not Detected	0.79	Not Detected
1,4-Dioxane	0.17	Not Detected	0.62	Not Detected
Bromodichloromethane	0.17	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
4-Methyl-2-pentanone	0.17	Not Detected	0.70	Not Detected
Toluene	0.17	9.7	0.65	36
trans-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.94	Not Detected
Tetrachloroethene	0.17	1.2	1.2	8.0

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG1101A

Lab ID#: 0903220A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**t032214**	**Date of Collection: 3/2/09 5:45:00 PM**	
Dil. Factor:	**1.72**	**Date of Analysis: 3/23/09 12:11 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Hexanone	0.86	Not Detected	3.5	Not Detected
Dibromochloromethane	0.17	Not Detected	1.5	Not Detected
1,2-Dibromoethane (EDB)	0.17	Not Detected	1.3	Not Detected
Chlorobenzene	0.17	Not Detected	0.79	Not Detected
Ethyl Benzene	0.17	1.3	0.75	5.7
m,p-Xylene	0.17	5.3	0.75	23
o-Xylene	0.17	1.8	0.75	8.0
Styrene	0.17	Not Detected	0.73	Not Detected
Bromoform	0.17	Not Detected	1.8	Not Detected
Cumene	0.17	Not Detected	0.84	Not Detected
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.2	Not Detected
Propylbenzene	0.17	0.20	0.84	0.96
4-Ethyltoluene	0.17	0.68	0.84	3.3
1,3,5-Trimethylbenzene	0.17	0.21	0.84	1.0
1,2,4-Trimethylbenzene	0.17	0.71	0.84	3.5
1,3-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.17	0.77	1.0	4.6
alpha-Chlorotoluene	0.17	Not Detected	0.89	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.86	Not Detected	6.4	Not Detected
Hexachlorobutadiene	0.86	Not Detected	9.2	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	88	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG110IA Lab Duplicate

Lab ID#: 0903220A-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**t032215**	**Date of Collection:**	**3/2/09 5:45:00 PM**
Dil. Factor:	**1.72**	**Date of Analysis:**	**3/23/09 12:56 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.53	0.85	2.6
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.17	0.40	0.36	0.84
Vinyl Chloride	0.17	Not Detected	0.44	Not Detected
1,3-Butadiene	0.17	Not Detected	0.38	Not Detected
Bromomethane	0.17	Not Detected	0.67	Not Detected
Chloroethane	0.17	Not Detected	0.45	Not Detected
Freon 11	0.17	0.24	0.97	1.3
Ethanol	0.86	180 E	1.6	340 E
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Acetone	0.86	15	2.0	35
2-Propanol	0.86	1.7	2.1	4.2
Carbon Disulfide	0.86	Not Detected	2.7	Not Detected
Methylene Chloride	0.34	Not Detected	1.2	Not Detected
Methyl tert-butyl ether	0.17	Not Detected	0.62	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Hexane	0.17	1.2	0.61	4.4
1,1-Dichloroethane	0.17	Not Detected	0.70	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.17	2.2	0.51	6.4
cis-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Tetrahydrofuran	0.86	Not Detected	2.5	Not Detected
Chloroform	0.17	Not Detected	0.84	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.94	Not Detected
Cyclohexane	0.17	0.67	0.59	2.3
Carbon Tetrachloride	0.17	Not Detected	1.1	Not Detected
Benzene	0.17	2.8	0.55	8.9
1,2-Dichloroethane	0.17	Not Detected	0.70	Not Detected
Heptane	0.17	0.78	0.70	3.2
Trichloroethene	0.17	Not Detected	0.92	Not Detected
1,2-Dichloropropane	0.17	Not Detected	0.79	Not Detected
1,4-Dioxane	0.17	Not Detected	0.62	Not Detected
Bromodichloromethane	0.17	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
4-Methyl-2-pentanone	0.17	Not Detected	0.70	Not Detected
Toluene	0.17	8.3	0.65	31
trans-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.94	Not Detected
Tetrachloroethene	0.17	0.92	1.2	6.3

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG1101A Lab Duplicate

Lab ID#: 0903220A-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**t032215**	**Date of Collection: 3/2/09 5:45:00 PM**	
Dil. Factor:	**1.72**	**Date of Analysis: 3/23/09 12:56 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Hexanone	0.86	Not Detected	3.5	Not Detected
Dibromochloromethane	0.17	Not Detected	1.5	Not Detected
1,2-Dibromoethane (EDB)	0.17	Not Detected	1.3	Not Detected
Chlorobenzene	0.17	Not Detected	0.79	Not Detected
Ethyl Benzene	0.17	1.1	0.75	4.9
m,p-Xylene	0.17	4.5	0.75	19
o-Xylene	0.17	1.5	0.75	6.7
Styrene	0.17	Not Detected	0.73	Not Detected
Bromoform	0.17	Not Detected	1.8	Not Detected
Cumene	0.17	Not Detected	0.84	Not Detected
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.2	Not Detected
Propylbenzene	0.17	Not Detected	0.84	Not Detected
4-Ethyltoluene	0.17	0.54	0.84	2.6
1,3,5-Trimethylbenzene	0.17	0.17	0.84	0.86
1,2,4-Trimethylbenzene	0.17	0.60	0.84	3.0
1,3-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.17	0.61	1.0	3.7
alpha-Chlorotoluene	0.17	Not Detected	0.89	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.86	Not Detected	6.4	Not Detected
Hexachlorobutadiene	0.86	Not Detected	9.2	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	87	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG111IA

Lab ID#: 0903220A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**t032216**	**Date of Collection:**	**3/2/09 6:00:00 PM**
Dil. Factor:	**1.69**	**Date of Analysis:**	**3/23/09 01:42 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.62	0.84	3.1
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.17	0.61	0.35	1.3
Vinyl Chloride	0.17	Not Detected	0.43	Not Detected
1,3-Butadiene	0.17	Not Detected	0.37	Not Detected
Bromomethane	0.17	Not Detected	0.66	Not Detected
Chloroethane	0.17	Not Detected	0.44	Not Detected
Freon 11	0.17	0.27	0.95	1.5
Ethanol	0.84	170 E	1.6	320 E
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Acetone	0.84	7.4	2.0	18
2-Propanol	0.84	2.1	2.1	5.2
Carbon Disulfide	0.84	Not Detected	2.6	Not Detected
Methylene Chloride	0.34	Not Detected	1.2	Not Detected
Methyl tert-butyl ether	0.17	Not Detected	0.61	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Hexane	0.17	1.5	0.60	5.3
1,1-Dichloroethane	0.17	Not Detected	0.68	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.17	1.3	0.50	3.7
cis-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Tetrahydrofuran	0.84	Not Detected	2.5	Not Detected
Chloroform	0.17	Not Detected	0.82	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.92	Not Detected
Cyclohexane	0.17	0.79	0.58	2.7
Carbon Tetrachloride	0.17	Not Detected	1.1	Not Detected
Benzene	0.17	3.3	0.54	11
1,2-Dichloroethane	0.17	Not Detected	0.68	Not Detected
Heptane	0.17	0.97	0.69	4.0
Trichloroethene	0.17	Not Detected	0.91	Not Detected
1,2-Dichloropropane	0.17	Not Detected	0.78	Not Detected
1,4-Dioxane	0.17	Not Detected	0.61	Not Detected
Bromodichloromethane	0.17	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.77	Not Detected
4-Methyl-2-pentanone	0.17	Not Detected	0.69	Not Detected
Toluene	0.17	10	0.64	39
trans-1,3-Dichloropropene	0.17	Not Detected	0.77	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.92	Not Detected
Tetrachloroethene	0.17	1.2	1.1	8.2

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG111IA

Lab ID#: 0903220A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	t032216	**Date of Collection:**	3/2/09 6:00:00 PM
Dil. Factor:	1.69	**Date of Analysis:**	3/23/09 01:42 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Hexanone	0.84	Not Detected	3.5	Not Detected
Dibromochloromethane	0.17	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.17	Not Detected	1.3	Not Detected
Chlorobenzene	0.17	Not Detected	0.78	Not Detected
Ethyl Benzene	0.17	1.4	0.73	6.1
m,p-Xylene	0.17	5.5	0.73	24
o-Xylene	0.17	2.0	0.73	8.6
Styrene	0.17	0.21	0.72	0.89
Bromoform	0.17	Not Detected	1.7	Not Detected
Cumene	0.17	Not Detected	0.83	Not Detected
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.2	Not Detected
Propylbenzene	0.17	0.20	0.83	1.0
4-Ethyltoluene	0.17	0.79	0.83	3.9
1,3,5-Trimethylbenzene	0.17	0.28	0.83	1.4
1,2,4-Trimethylbenzene	0.17	0.96	0.83	4.7
1,3-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.17	0.79	1.0	4.8
alpha-Chlorotoluene	0.17	Not Detected	0.87	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.84	Not Detected	6.3	Not Detected
Hexachlorobutadiene	0.84	Not Detected	9.0	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	88	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG113AA

Lab ID#: 0903220A-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**t032217**	**Date of Collection:**	**3/2/09 6:30:00 PM**
Dil. Factor:	**1.24**	**Date of Analysis:**	**3/23/09 02:32 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.12	0.68	0.61	3.4
Freon 114	0.12	Not Detected	0.87	Not Detected
Chloromethane	0.12	0.65	0.26	1.3
Vinyl Chloride	0.12	Not Detected	0.32	Not Detected
1,3-Butadiene	0.12	Not Detected	0.27	Not Detected
Bromomethane	0.12	Not Detected	0.48	Not Detected
Chloroethane	0.12	Not Detected	0.33	Not Detected
Freon 11	0.12	0.31	0.70	1.7
Ethanol	0.62	0.79	1.2	1.5
Freon 113	0.12	Not Detected	0.95	Not Detected
1,1-Dichloroethene	0.12	Not Detected	0.49	Not Detected
Acetone	0.62	2.0	1.5	4.9
2-Propanol	0.62	Not Detected	1.5	Not Detected
Carbon Disulfide	0.62	Not Detected	1.9	Not Detected
Methylene Chloride	0.25	Not Detected	0.86	Not Detected
Methyl tert-butyl ether	0.12	Not Detected	0.45	Not Detected
trans-1,2-Dichloroethene	0.12	Not Detected	0.49	Not Detected
Hexane	0.12	0.17	0.44	0.59
1,1-Dichloroethane	0.12	Not Detected	0.50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.12	Not Detected	0.36	Not Detected
cis-1,2-Dichloroethene	0.12	Not Detected	0.49	Not Detected
Tetrahydrofuran	0.62	Not Detected	1.8	Not Detected
Chloroform	0.12	Not Detected	0.60	Not Detected
1,1,1-Trichloroethane	0.12	Not Detected	0.68	Not Detected
Cyclohexane	0.12	Not Detected	0.43	Not Detected
Carbon Tetrachloride	0.12	Not Detected	0.78	Not Detected
Benzene	0.12	0.67	0.40	2.1
1,2-Dichloroethane	0.12	Not Detected	0.50	Not Detected
Heptane	0.12	Not Detected	0.51	Not Detected
Trichloroethene	0.12	Not Detected	0.67	Not Detected
1,2-Dichloropropane	0.12	Not Detected	0.57	Not Detected
1,4-Dioxane	0.12	Not Detected	0.45	Not Detected
Bromodichloromethane	0.12	Not Detected	0.83	Not Detected
cis-1,3-Dichloropropene	0.12	Not Detected	0.56	Not Detected
4-Methyl-2-pentanone	0.12	Not Detected	0.51	Not Detected
Toluene	0.12	0.97	0.47	3.7
trans-1,3-Dichloropropene	0.12	Not Detected	0.56	Not Detected
1,1,2-Trichloroethane	0.12	Not Detected	0.68	Not Detected
Tetrachloroethene	0.12	Not Detected	0.84	Not Detected

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG113AA

Lab ID#: 0903220A-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**t032217**	**Date of Collection: 3/2/09 6:30:00 PM**	
Dil. Factor:	**1.24**	**Date of Analysis: 3/23/09 02:32 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Hexanone	0.62	Not Detected	2.5	Not Detected
Dibromochloromethane	0.12	Not Detected	1.0	Not Detected
1,2-Dibromoethane (EDB)	0.12	Not Detected	0.95	Not Detected
Chlorobenzene	0.12	Not Detected	0.57	Not Detected
Ethyl Benzene	0.12	Not Detected	0.54	Not Detected
m,p-Xylene	0.12	0.23	0.54	0.99
o-Xylene	0.12	Not Detected	0.54	Not Detected
Styrene	0.12	Not Detected	0.53	Not Detected
Bromoform	0.12	Not Detected	1.3	Not Detected
Cumene	0.12	Not Detected	0.61	Not Detected
1,1,2,2-Tetrachloroethane	0.12	Not Detected	0.85	Not Detected
Propylbenzene	0.12	Not Detected	0.61	Not Detected
4-Ethyltoluene	0.12	Not Detected	0.61	Not Detected
1,3,5-Trimethylbenzene	0.12	Not Detected	0.61	Not Detected
1,2,4-Trimethylbenzene	0.12	Not Detected	0.61	Not Detected
1,3-Dichlorobenzene	0.12	Not Detected	0.74	Not Detected
1,4-Dichlorobenzene	0.12	Not Detected	0.74	Not Detected
alpha-Chlorotoluene	0.12	Not Detected	0.64	Not Detected
1,2-Dichlorobenzene	0.12	Not Detected	0.74	Not Detected
1,2,4-Trichlorobenzene	0.62	Not Detected	4.6	Not Detected
Hexachlorobutadiene	0.62	Not Detected	6.6	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	88	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG117JA

Lab ID#: 0903220A-12A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**t032218**	**Date of Collection: 3/3/09 5:45:00 PM**	
Dil. Factor:	**1.63**	**Date of Analysis: 3/23/09 03:09 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.83	0.81	4.1
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.16	0.55	0.34	1.1
Vinyl Chloride	0.16	Not Detected	0.42	Not Detected
1,3-Butadiene	0.16	Not Detected	0.36	Not Detected
Bromomethane	0.16	Not Detected	0.63	Not Detected
Chloroethane	0.16	Not Detected	0.43	Not Detected
Freon 11	0.16	0.29	0.92	1.6
Ethanol	0.82	220 E	1.5	410 E
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	130 E	1.9	310 E
2-Propanol	0.82	3.5	2.0	8.5
Carbon Disulfide	0.82	Not Detected	2.5	Not Detected
Methylene Chloride	0.33	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.59	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Hexane	0.16	0.63	0.57	2.2
1,1-Dichloroethane	0.16	Not Detected	0.66	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.16	9.7	0.48	29
cis-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Tetrahydrofuran	0.82	2.4	2.4	7.2
Chloroform	0.16	Not Detected	0.80	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Cyclohexane	0.16	0.35	0.56	1.2
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
Benzene	0.16	0.82	0.52	2.6
1,2-Dichloroethane	0.16	Not Detected	0.66	Not Detected
Heptane	0.16	0.68	0.67	2.8
Trichloroethene	0.16	Not Detected	0.88	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.75	Not Detected
1,4-Dioxane	0.16	Not Detected	0.59	Not Detected
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.67	Not Detected
Toluene	0.16	3.8	0.61	14
trans-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Tetrachloroethene	0.16	8.6	1.1	58

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG117IA

Lab ID#: 0903220A-12A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**t032218**	**Date of Collection: 3/3/09 5:45:00 PM**	
Dil. Factor:	**1.63**	**Date of Analysis: 3/23/09 03:09 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Hexanone	0.82	Not Detected	3.3	Not Detected
Dibromochloromethane	0.16	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Chlorobenzene	0.16	0.33	0.75	1.5
Ethyl Benzene	0.16	0.39	0.71	1.7
m,p-Xylene	0.16	1.4	0.71	6.3
o-Xylene	0.16	0.48	0.71	2.1
Styrene	0.16	0.23	0.69	0.97
Bromoform	0.16	Not Detected	1.7	Not Detected
Cumene	0.16	Not Detected	0.80	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.80	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.80	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.80	Not Detected
1,2,4-Trimethylbenzene	0.16	0.20	0.80	1.0
1,3-Dichlorobenzene	0.16	Not Detected	0.98	Not Detected
1,4-Dichlorobenzene	0.16	3.9	0.98	23
alpha-Chlorotoluene	0.16	Not Detected	0.84	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.98	Not Detected
1,2,4-Trichlorobenzene	0.82	Not Detected	6.0	Not Detected
Hexachlorobutadiene	0.82	Not Detected	8.7	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	86	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG118TB

Lab ID#: 0903220A-13A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**t032219**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/23/09 04:17 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.10	Not Detected	0.49	Not Detected
Freon 114	0.10	Not Detected	0.70	Not Detected
Chloromethane	0.10	0.10	0.21	0.21
Vinyl Chloride	0.10	Not Detected	0.26	Not Detected
1,3-Butadiene	0.10	Not Detected	0.22	Not Detected
Bromomethane	0.10	Not Detected	0.39	Not Detected
Chloroethane	0.10	Not Detected	0.26	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Ethanol	0.50	3.0	0.94	5.7
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Acetone	0.50	2.3	1.2	5.5
2-Propanol	0.50	0.66	1.2	1.6
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
Methylene Chloride	0.20	0.22	0.69	0.77
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Hexane	0.10	0.33	0.35	1.2
1,1-Dichloroethane	0.10	Not Detected	0.40	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.10	0.70	0.29	2.0
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.10	Not Detected	0.49	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Cyclohexane	0.10	0.13	0.34	0.45
Carbon Tetrachloride	0.10	Not Detected	0.63	Not Detected
Benzene	0.10	0.29	0.32	0.92
1,2-Dichloroethane	0.10	Not Detected	0.40	Not Detected
Heptane	0.10	0.23	0.41	0.96
Trichloroethene	0.10	Not Detected	0.54	Not Detected
1,2-Dichloropropane	0.10	Not Detected	0.46	Not Detected
1,4-Dioxane	0.10	Not Detected	0.36	Not Detected
Bromodichloromethane	0.10	Not Detected	0.67	Not Detected
cis-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
4-Methyl-2-pentanone	0.10	Not Detected	0.41	Not Detected
Toluene	0.10	1.7	0.38	6.2
trans-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
1,1,2-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG118TB

Lab ID#: 0903220A-13A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**t032219**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/23/09 04:17 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Hexanone	0.50	Not Detected	2.0	Not Detected
Dibromochloromethane	0.10	Not Detected	0.85	Not Detected
1,2-Dibromoethane (EDB)	0.10	Not Detected	0.77	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	0.16	0.43	0.70
m,p-Xylene	0.10	0.41	0.43	1.8
o-Xylene	0.10	0.16	0.43	0.72
Styrene	0.10	Not Detected	0.42	Not Detected
Bromoform	0.10	Not Detected	1.0	Not Detected
Cumene	0.10	Not Detected	0.49	Not Detected
1,1,2,2-Tetrachloroethane	0.10	Not Detected	0.69	Not Detected
Propylbenzene	0.10	Not Detected	0.49	Not Detected
4-Ethyltoluene	0.10	Not Detected	0.49	Not Detected
1,3,5-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,2,4-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
alpha-Chlorotoluene	0.10	Not Detected	0.52	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected
Hexachlorobutadiene	0.50	Not Detected	5.3	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	90	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0903220A-14A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**t032206**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/22/09 04:03 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.10	Not Detected	0.49	Not Detected
Freon 114	0.10	Not Detected	0.70	Not Detected
Chloromethane	0.10	Not Detected	0.21	Not Detected
Vinyl Chloride	0.10	Not Detected	0.26	Not Detected
1,3-Butadiene	0.10	Not Detected	0.22	Not Detected
Bromomethane	0.10	Not Detected	0.39	Not Detected
Chloroethane	0.10	Not Detected	0.26	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Ethanol	0.50	Not Detected	0.94	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Acetone	0.50	Not Detected	1.2	Not Detected
2-Propanol	0.50	Not Detected	1.2	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Hexane	0.10	Not Detected	0.35	Not Detected
1,1-Dichloroethane	0.10	Not Detected	0.40	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.10	Not Detected	0.29	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.10	Not Detected	0.49	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Cyclohexane	0.10	Not Detected	0.34	Not Detected
Carbon Tetrachloride	0.10	Not Detected	0.63	Not Detected
Benzene	0.10	Not Detected	0.32	Not Detected
1,2-Dichloroethane	0.10	Not Detected	0.40	Not Detected
Heptane	0.10	Not Detected	0.41	Not Detected
Trichloroethene	0.10	Not Detected	0.54	Not Detected
1,2-Dichloropropane	0.10	Not Detected	0.46	Not Detected
1,4-Dioxane	0.10	Not Detected	0.36	Not Detected
Bromodichloromethane	0.10	Not Detected	0.67	Not Detected
cis-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
4-Methyl-2-pentanone	0.10	Not Detected	0.41	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
trans-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
1,1,2-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0903220A-14A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**t032206**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/22/09 04:03 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Hexanone	0.50	Not Detected	2.0	Not Detected
Dibromochloromethane	0.10	Not Detected	0.85	Not Detected
1,2-Dibromoethane (EDB)	0.10	Not Detected	0.77	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
Styrene	0.10	Not Detected	0.42	Not Detected
Bromoform	0.10	Not Detected	1.0	Not Detected
Cumene	0.10	Not Detected	0.49	Not Detected
1,1,2,2-Tetrachloroethane	0.10	Not Detected	0.69	Not Detected
Propylbenzene	0.10	Not Detected	0.49	Not Detected
4-Ethyltoluene	0.10	Not Detected	0.49	Not Detected
1,3,5-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,2,4-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
alpha-Chlorotoluene	0.10	Not Detected	0.52	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected
Hexachlorobutadiene	0.50	Not Detected	5.3	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	89	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0903220A-15A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**t032202**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/22/09 11:05 AM**	

Compound	%Recovery
Freon 12	101
Freon 114	93
Chloromethane	90
Vinyl Chloride	95
1,3-Butadiene	94
Bromomethane	107
Chloroethane	100
Freon 11	94
Ethanol	99
Freon 113	97
1,1-Dichloroethene	101
Acetone	94
2-Propanol	99
Carbon Disulfide	93
Methylene Chloride	91
Methyl tert-butyl ether	98
trans-1,2-Dichloroethene	100
Hexane	90
1,1-Dichloroethane	96
2-Butanone (Methyl Ethyl Ketone)	102
cis-1,2-Dichloroethene	102
Tetrahydrofuran	92
Chloroform	101
1,1,1-Trichloroethane	99
Cyclohexane	96
Carbon Tetrachloride	103
Benzene	100
1,2-Dichloroethane	109
Heptane	99
Trichloroethene	109
1,2-Dichloropropane	97
1,4-Dioxane	101
Bromodichloromethane	104
cis-1,3-Dichloropropene	106
4-Methyl-2-pentanone	99
Toluene	101
trans-1,3-Dichloropropene	116
1,1,2-Trichloroethane	107
Tetrachloroethene	109

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0903220A-15A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**t032202**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/22/09 11:05 AM**	

Compound	%Recovery
2-Hexanone	108
Dibromochloromethane	114
1,2-Dibromoethane (EDB)	113
Chlorobenzene	110
Ethyl Benzene	109
m,p-Xylene	113
o-Xylene	113
Styrene	117
Bromoform	119
Cumene	115
1,1,2,2-Tetrachloroethane	114
Propylbenzene	120
4-Ethyltoluene	126
1,3,5-Trimethylbenzene	118
1,2,4-Trimethylbenzene	123
1,3-Dichlorobenzene	119
1,4-Dichlorobenzene	119
alpha-Chlorotoluene	127
1,2-Dichlorobenzene	121
1,2,4-Trichlorobenzene	122
Hexachlorobutadiene	112

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	93	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0903220A-16A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**t032203**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/22/09 12:14 PM**	

Compound	%Recovery
Freon 12	101
Freon 114	100
Chloromethane	95
Vinyl Chloride	100
1,3-Butadiene	102
Bromomethane	106
Chloroethane	102
Freon 11	104
Ethanol	84
Freon 113	115
1,1-Dichloroethene	120
Acetone	104
2-Propanol	107
Carbon Disulfide	104
Methylene Chloride	109
Methyl tert-butyl ether	104
trans-1,2-Dichloroethene	104
Hexane	96
1,1-Dichloroethane	106
2-Butanone (Methyl Ethyl Ketone)	108
cis-1,2-Dichloroethene	107
Tetrahydrofuran	96
Chloroform	105
1,1,1-Trichloroethane	104
Cyclohexane	102
Carbon Tetrachloride	106
Benzene	107
1,2-Dichloroethane	114
Heptane	105
Trichloroethene	108
1,2-Dichloropropane	104
1,4-Dioxane	110
Bromodichloromethane	111
cis-1,3-Dichloropropene	110
4-Methyl-2-pentanone	108
Toluene	111
trans-1,3-Dichloropropene	114
1,1,2-Trichloroethane	112
Tetrachloroethene	113

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0903220A-16A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**t032203**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/22/09 12:14 PM**	

Compound	%Recovery
2-Hexanone	110
Dibromochloromethane	118
1,2-Dibromoethane (EDB)	112
Chlorobenzene	112
Ethyl Benzene	112
m,p-Xylene	114
o-Xylene	120
Styrene	119
Bromoform	121
Cumene	121
1,1,2,2-Tetrachloroethane	120
Propylbenzene	122
4-Ethyltoluene	125
1,3,5-Trimethylbenzene	118
1,2,4-Trimethylbenzene	122
1,3-Dichlorobenzene	119
1,4-Dichlorobenzene	117
alpha-Chlorotoluene	129
1,2-Dichlorobenzene	117
1,2,4-Trichlorobenzene	113
Hexachlorobutadiene	112

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	91	70-130

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager Ben Martich
Collected by: (Print and Sign) Ben Martich
Company DAS15 Email bmartich@dasienv.com
Address _____ City _____ State ____ Zip ____
Phone _____ Fax _____

Project Info:
P.O. # 14-139
Project # _____
Project Name 4th & Gamble II

Turn Around Time:
☒ Normal
☐ Rush
_____ specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psig)
01A	094AG106AA	4241	3/2/09	0915	TO-15 LL	23	6		
02A	094AG107CS	34192		0930	TO-15 LL	29.5	5		
03A	094AG108CS	34267		0940	TO-15 LL	30	8		
	094AG109SG	11823		1705	TO-15	28	8		
05A	094AG110IA	5718		1745	TO-15 LL	29	9		
06A	094AG111IA	34200		1800	TO-15 LL	29	10		
	094AG112SG	22968		1820	TO-15	30	10.5		
08A	094AG113AA	926	↓	1830	TO-15 LL	30	2		
	094AG114SG	12042	3/3/09	0930	TO-15	30	12		
	094AG115SG	34626	3/3/09	1000	TO-15	30	11		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
B. Martich	3/5/09 0800	Monica Gregson AIR	3/9/09 910
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes:
No vacuum gauge provided. Initial and final vacuums are estimates that were taken using an imprecise gauge.

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fed Ex		NA	Good	Yes No (None)	090322O

Form 1253 rev.11

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager: Ben Matich
Collected by: (Print and Sign) B. Matich
Company: OASIS Email: b.matich@oasisenviro.com
Address: ______ City: ______ State: ____ Zip: ____
Phone: ______ Fax: ______

Project Info:
P.O. #: 14-139
Project #: ______
Project Name: 4th + Gambell

Turn Around Time:
☑ Normal
☐ Rush
______ specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas:
N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
	094AG116SG	33632	3/3/09	1050	TO-15	30	12.5		
12A	094AG117IA	14109	3/3/09	1745	TO-15LL	30	6		
13A	094AG118TB	—	—	—	TO-15LL	—	—		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time	Notes:
B. Matich	3/5/09 0800	Monica Gregson	ATL 3/9/09 910	

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fed Ex		NA	Good	Yes No (None)	0903220

Form 1293 rev.11

AN ENVIRONMENTAL ANALYTICAL LABORATORY

3/20/2009
Mr. Ben Martich
Oasis Environmental, Inc.
825 W. 8th Avenue
Suite 200
Anchorage AK 99501

Project Name: 4th and Gambell
Project #:
Workorder #: 0903220B

Dear Mr. Ben Martich

The following report includes the data for the above referenced project for sample(s) received on 3/9/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for you air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kelly Buettner
Project Manager

WORK ORDER #: 0903220B

Work Order Summary

CLIENT:	Mr. Ben Martich Oasis Environmental, Inc. 825 W. 8th Avenue Suite 200 Anchorage, AK 99501	**BILL TO:**	Mr. Ben Martich Oasis Environmental, Inc. 825 W. 8th Avenue Suite 200 Anchorage, AK 99501
PHONE:	907-258-4880	**P.O. #**	14-139
FAX:		**PROJECT #**	4th and Gambell
DATE RECEIVED:	03/09/2009	**CONTACT:**	Kelly Buettner
DATE COMPLETED:	03/20/2009		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
04A	094AG109SG	Modified TO-15	5.4 "Hg	15 psi
07A	094AG112SG	Modified TO-15	8.0 "Hg	15 psi
09A	094AG114SG	Modified TO-15	5.2 "Hg	15 psi
10A	094AG115SG	Modified TO-15	4.8 "Hg	15 psi
10AA	094AG115SG Lab Duplicate	Modified TO-15	4.8 "Hg	15 psi
11A	094AG116SG	Modified TO-15	5.8 "Hg	15 psi
12A	Lab Blank	Modified TO-15	NA	NA
12B	Lab Blank	Modified TO-15	NA	NA
13A	CCV	Modified TO-15	NA	NA
13B	CCV	Modified TO-15	NA	NA
14A	LCS	Modified TO-15	NA	NA
14B	LCS	Modified TO-15	NA	NA

CERTIFIED BY: _____ DATE: 03/20/09

Laboratory Director

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
Oasis Environmental, Inc.
Workorder# 0903220B

Five 1 Liter Summa Canister samples were received on March 09, 2009. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	*TO-15*	*ATL Modifications*
Daily CCV	</= 30% Difference	</= 30% Difference; Compounds exceeding this criterion and associated data are flagged and narrated.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There was a significant difference (greater than 5.0" Hg) between the measured canister receipt vacuum and that which was reported on the Chain of Custody (COC) for samples 094AG114SG, 094AG115SG and 094AG116SG. Therefore the vacuum measured in the laboratory was used to calculate results.

Analytical Notes

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction no

performed).

J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the reporting limit
UJ- Non-detected compound associated with low bias in the CCV
N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: 094AG109SG

Lab ID#: 0903220B-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Ethanol	4.9	8.9	9.3	17
Acetone	4.9	16	12	38
2-Butanone (Methyl Ethyl Ketone)	1.2	4.8	3.6	14
Tetrahydrofuran	1.2	10	3.6	31
Toluene	1.2	2.0	4.6	7.6
Tetrachloroethene	1.2	13	8.3	89
m,p-Xylene	1.2	2.0	5.3	8.7

Client Sample ID: 094AG112SG

Lab ID#: 0903220B-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Butanone (Methyl Ethyl Ketone)	1.4	2.1	4.1	6.2
Tetrahydrofuran	1.4	2.6	4.1	7.6
Toluene	1.4	2.3	5.2	8.6
Tetrachloroethene	1.4	2.5	9.4	17

Client Sample ID: 094AG114SG

Lab ID#: 0903220B-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Tetrahydrofuran	1.2	1.4	3.6	4.0
Tetrachloroethene	1.2	6.7	8.3	45

Client Sample ID: 094AG115SG

Lab ID#: 0903220B-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Ethanol	4.8	5.4	9.0	10
Tetrahydrofuran	1.2	1.4	3.5	4.1
Tetrachloroethene	1.2	6.6	8.1	45

Client Sample ID: 094AG115SG Lab Duplicate

Lab ID#: 0903220B-10AA

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: 094AG115SG Lab Duplicate

Lab ID#: 0903220B-10AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Ethanol	4.8	5.1	9.0	9.5
Tetrahydrofuran	1.2	1.3	3.5	3.8
Tetrachloroethene	1.2	6.5	8.1	44

Client Sample ID: 094AG116SG

Lab ID#: 0903220B-11A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.2	1.3	6.2	6.6
Tetrahydrofuran	1.2	2.3	3.7	6.8
Toluene	1.2	2.1	4.7	8.0
Tetrachloroethene	1.2	310	8.5	2100

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG109SG

Lab ID#: 0903220B-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**y031521**	**Date of Collection: 3/2/09 5:05:00 PM**	
Dil. Factor:	**2.46**	**Date of Analysis: 3/15/09 04:22 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.2	Not Detected	6.1	Not Detected
Freon 114	1.2	Not Detected	8.6	Not Detected
Chloromethane	4.9	Not Detected	10	Not Detected
Vinyl Chloride	1.2	Not Detected	3.1	Not Detected
1,3-Butadiene	1.2	Not Detected	2.7	Not Detected
Bromomethane	1.2	Not Detected	4.8	Not Detected
Chloroethane	1.2	Not Detected	3.2	Not Detected
Freon 11	1.2	Not Detected	6.9	Not Detected
Ethanol	4.9	8.9	9.3	17
Freon 113	1.2	Not Detected	9.4	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Acetone	4.9	16	12	38
2-Propanol	4.9	Not Detected	12	Not Detected
Carbon Disulfide	1.2	Not Detected	3.8	Not Detected
3-Chloropropene	4.9	Not Detected	15	Not Detected
Methylene Chloride	1.2	Not Detected	4.3	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.4	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Hexane	1.2	Not Detected	4.3	Not Detected
1,1-Dichloroethane	1.2	Not Detected	5.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	4.8	3.6	14
cis-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Tetrahydrofuran	1.2	10	3.6	31
Chloroform	1.2	Not Detected	6.0	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Cyclohexane	1.2	Not Detected	4.2	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.7	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.7	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
1,2-Dichloroethane	1.2	Not Detected	5.0	Not Detected
Heptane	1.2	Not Detected	5.0	Not Detected
Trichloroethene	1.2	Not Detected	6.6	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.7	Not Detected
1,4-Dioxane	4.9	Not Detected	18	Not Detected
Bromodichloromethane	1.2	Not Detected	8.2	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.6	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	5.0	Not Detected
Toluene	1.2	2.0	4.6	7.6
trans-1,3-Dichloropropene	1.2	Not Detected	5.6	Not Detected

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG109SG

Lab ID#: 0903220B-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**y031521**	**Date of Collection: 3/2/09 5:05:00 PM**	
Dil. Factor:	**2.46**	**Date of Analysis: 3/15/09 04:22 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Tetrachloroethene	1.2	13	8.3	89
2-Hexanone	4.9	Not Detected	20	Not Detected
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.4	Not Detected
Chlorobenzene	1.2	Not Detected	5.7	Not Detected
Ethyl Benzene	1.2	Not Detected	5.3	Not Detected
m,p-Xylene	1.2	2.0	5.3	8.7
o-Xylene	1.2	Not Detected	5.3	Not Detected
Styrene	1.2	Not Detected	5.2	Not Detected
Bromoform	1.2	Not Detected	13	Not Detected
Cumene	1.2	Not Detected	6.0	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.4	Not Detected
Propylbenzene	1.2	Not Detected	6.0	Not Detected
4-Ethyltoluene	1.2	Not Detected	6.0	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	6.0	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	6.0	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.4	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
1,2,4-Trichlorobenzene	4.9	Not Detected	36	Not Detected
Hexachlorobutadiene	4.9	Not Detected	52	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	109	70-130
4-Bromofluorobenzene	113	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG112SG

Lab ID#: 0903220B-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d031207**	**Date of Collection: 3/2/09 6:20:00 PM**	
Dil. Factor:	**2.76**	**Date of Analysis: 3/12/09 02:30 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.4	Not Detected	6.8	Not Detected
Freon 114	1.4	Not Detected	9.6	Not Detected
Chloromethane	5.5	Not Detected	11	Not Detected
Vinyl Chloride	1.4	Not Detected	3.5	Not Detected
1,3-Butadiene	1.4	Not Detected	3.0	Not Detected
Bromomethane	1.4	Not Detected	5.4	Not Detected
Chloroethane	1.4	Not Detected	3.6	Not Detected
Freon 11	1.4	Not Detected	7.8	Not Detected
Ethanol	5.5	Not Detected	10	Not Detected
Freon 113	1.4	Not Detected	10	Not Detected
1,1-Dichloroethene	1.4	Not Detected	5.5	Not Detected
Acetone	5.5	Not Detected	13	Not Detected
2-Propanol	5.5	Not Detected	14	Not Detected
Carbon Disulfide	1.4	Not Detected	4.3	Not Detected
3-Chloropropene	5.5	Not Detected	17	Not Detected
Methylene Chloride	1.4	Not Detected	4.8	Not Detected
Methyl tert-butyl ether	1.4	Not Detected	5.0	Not Detected
trans-1,2-Dichloroethene	1.4	Not Detected	5.5	Not Detected
Hexane	1.4	Not Detected	4.9	Not Detected
1,1-Dichloroethane	1.4	Not Detected	5.6	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.4	2.1	4.1	6.2
cis-1,2-Dichloroethene	1.4	Not Detected	5.5	Not Detected
Tetrahydrofuran	1.4	2.6	4.1	7.6
Chloroform	1.4	Not Detected	6.7	Not Detected
1,1,1-Trichloroethane	1.4	Not Detected	7.5	Not Detected
Cyclohexane	1.4	Not Detected	4.8	Not Detected
Carbon Tetrachloride	1.4	Not Detected	8.7	Not Detected
2,2,4-Trimethylpentane	1.4	Not Detected	6.4	Not Detected
Benzene	1.4	Not Detected	4.4	Not Detected
1,2-Dichloroethane	1.4	Not Detected	5.6	Not Detected
Heptane	1.4	Not Detected	5.6	Not Detected
Trichloroethene	1.4	Not Detected	7.4	Not Detected
1,2-Dichloropropane	1.4	Not Detected	6.4	Not Detected
1,4-Dioxane	5.5	Not Detected	20	Not Detected
Bromodichloromethane	1.4	Not Detected	9.2	Not Detected
cis-1,3-Dichloropropene	1.4	Not Detected	6.3	Not Detected
4-Methyl-2-pentanone	1.4	Not Detected	5.6	Not Detected
Toluene	1.4	2.3	5.2	8.6
trans-1,3-Dichloropropene	1.4	Not Detected	6.3	Not Detected

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG112SG

Lab ID#: 0903220B-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d031207**	**Date of Collection: 3/2/09 6:20:00 PM**	
Dil. Factor:	**2.76**	**Date of Analysis: 3/12/09 02:30 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	1.4	Not Detected	7.5	Not Detected
Tetrachloroethene	1.4	2.5	9.4	17
2-Hexanone	5.5	Not Detected	23	Not Detected
Dibromochloromethane	1.4	Not Detected	12	Not Detected
1,2-Dibromoethane (EDB)	1.4	Not Detected	11	Not Detected
Chlorobenzene	1.4	Not Detected	6.4	Not Detected
Ethyl Benzene	1.4	Not Detected	6.0	Not Detected
m,p-Xylene	1.4	Not Detected	6.0	Not Detected
o-Xylene	1.4	Not Detected	6.0	Not Detected
Styrene	1.4	Not Detected	5.9	Not Detected
Bromoform	1.4	Not Detected	14	Not Detected
Cumene	1.4	Not Detected	6.8	Not Detected
1,1,2,2-Tetrachloroethane	1.4	Not Detected	9.5	Not Detected
Propylbenzene	1.4	Not Detected	6.8	Not Detected
4-Ethyltoluene	1.4	Not Detected	6.8	Not Detected
1,3,5-Trimethylbenzene	1.4	Not Detected	6.8	Not Detected
1,2,4-Trimethylbenzene	1.4	Not Detected	6.8	Not Detected
1,3-Dichlorobenzene	1.4	Not Detected	8.3	Not Detected
1,4-Dichlorobenzene	1.4	Not Detected	8.3	Not Detected
alpha-Chlorotoluene	1.4	Not Detected	7.1	Not Detected
1,2-Dichlorobenzene	1.4	Not Detected	8.3	Not Detected
1,2,4-Trichlorobenzene	5.5	Not Detected	41	Not Detected
Hexachlorobutadiene	5.5	Not Detected	59	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	115	70-130
4-Bromofluorobenzene	100	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG114SG

Lab ID#: 0903220B-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d031208**	**Date of Collection: 3/3/09 9:30:00 AM**	
Dil. Factor:	**2.44**	**Date of Analysis: 3/12/09 03:49 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.2	Not Detected	6.0	Not Detected
Freon 114	1.2	Not Detected	8.5	Not Detected
Chloromethane	4.9	Not Detected	10	Not Detected
Vinyl Chloride	1.2	Not Detected	3.1	Not Detected
1,3-Butadiene	1.2	Not Detected	2.7	Not Detected
Bromomethane	1.2	Not Detected	4.7	Not Detected
Chloroethane	1.2	Not Detected	3.2	Not Detected
Freon 11	1.2	Not Detected	6.8	Not Detected
Ethanol	4.9	Not Detected	9.2	Not Detected
Freon 113	1.2	Not Detected	9.4	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Acetone	4.9	Not Detected	12	Not Detected
2-Propanol	4.9	Not Detected	12	Not Detected
Carbon Disulfide	1.2	Not Detected	3.8	Not Detected
3-Chloropropene	4.9	Not Detected	15	Not Detected
Methylene Chloride	1.2	Not Detected	4.2	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.4	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Hexane	1.2	Not Detected	4.3	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	Not Detected	3.6	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Tetrahydrofuran	1.2	1.4	3.6	4.0
Chloroform	1.2	Not Detected	6.0	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Cyclohexane	1.2	Not Detected	4.2	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.7	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.7	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.9	Not Detected
Heptane	1.2	Not Detected	5.0	Not Detected
Trichloroethene	1.2	Not Detected	6.6	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.6	Not Detected
1,4-Dioxane	4.9	Not Detected	18	Not Detected
Bromodichloromethane	1.2	Not Detected	8.2	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.5	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	5.0	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
trans-1,3-Dichloropropene	1.2	Not Detected	5.5	Not Detected

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG114SG

Lab ID#: 0903220B-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d031208**	**Date of Collection: 3/3/09 9:30:00 AM**	
Dil. Factor:	**2.44**	**Date of Analysis: 3/12/09 03:49 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Tetrachloroethene	1.2	6.7	8.3	45
2-Hexanone	4.9	Not Detected	20	Not Detected
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.4	Not Detected
Chlorobenzene	1.2	Not Detected	5.6	Not Detected
Ethyl Benzene	1.2	Not Detected	5.3	Not Detected
m,p-Xylene	1.2	Not Detected	5.3	Not Detected
o-Xylene	1.2	Not Detected	5.3	Not Detected
Styrene	1.2	Not Detected	5.2	Not Detected
Bromoform	1.2	Not Detected	13	Not Detected
Cumene	1.2	Not Detected	6.0	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.4	Not Detected
Propylbenzene	1.2	Not Detected	6.0	Not Detected
4-Ethyltoluene	1.2	Not Detected	6.0	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	6.0	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	6.0	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.3	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
1,2,4-Trichlorobenzene	4.9	Not Detected	36	Not Detected
Hexachlorobutadiene	4.9	Not Detected	52	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	115	70-130
4-Bromofluorobenzene	101	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG115SG

Lab ID#: 0903220B-10A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d031209**	**Date of Collection:**	**3/3/09 10:00:00 AM**
Dil. Factor:	**2.40**	**Date of Analysis:**	**3/12/09 04:31 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.2	Not Detected	5.9	Not Detected
Freon 114	1.2	Not Detected	8.4	Not Detected
Chloromethane	4.8	Not Detected	9.9	Not Detected
Vinyl Chloride	1.2	Not Detected	3.1	Not Detected
1,3-Butadiene	1.2	Not Detected	2.6	Not Detected
Bromomethane	1.2	Not Detected	4.7	Not Detected
Chloroethane	1.2	Not Detected	3.2	Not Detected
Freon 11	1.2	Not Detected	6.7	Not Detected
Ethanol	4.8	5.4	9.0	10
Freon 113	1.2	Not Detected	9.2	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Acetone	4.8	Not Detected	11	Not Detected
2-Propanol	4.8	Not Detected	12	Not Detected
Carbon Disulfide	1.2	Not Detected	3.7	Not Detected
3-Chloropropene	4.8	Not Detected	15	Not Detected
Methylene Chloride	1.2	Not Detected	4.2	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.3	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Hexane	1.2	Not Detected	4.2	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.8	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Tetrahydrofuran	1.2	1.4	3.5	4.1
Chloroform	1.2	Not Detected	5.8	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.5	Not Detected
Cyclohexane	1.2	Not Detected	4.1	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.6	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.6	Not Detected
Benzene	1.2	Not Detected	3.8	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.8	Not Detected
Heptane	1.2	Not Detected	4.9	Not Detected
Trichloroethene	1.2	Not Detected	6.4	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.5	Not Detected
1,4-Dioxane	4.8	Not Detected	17	Not Detected
Bromodichloromethane	1.2	Not Detected	8.0	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.4	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	4.9	Not Detected
Toluene	1.2	Not Detected	4.5	Not Detected
trans-1,3-Dichloropropene	1.2	Not Detected	5.4	Not Detected

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG115SG

Lab ID#: 0903220B-10A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d031209**	**Date of Collection: 3/3/09 10:00:00 AM**	
Dil. Factor:	**2.40**	**Date of Analysis: 3/12/09 04:31 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	1.2	Not Detected	6.5	Not Detected
Tetrachloroethene	1.2	6.6	8.1	45
2-Hexanone	4.8	Not Detected	20	Not Detected
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.2	Not Detected
Chlorobenzene	1.2	Not Detected	5.5	Not Detected
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
m,p-Xylene	1.2	Not Detected	5.2	Not Detected
o-Xylene	1.2	Not Detected	5.2	Not Detected
Styrene	1.2	Not Detected	5.1	Not Detected
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	5.9	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.2	Not Detected
Propylbenzene	1.2	Not Detected	5.9	Not Detected
4-Ethyltoluene	1.2	Not Detected	5.9	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	5.9	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	5.9	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.2	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
1,2,4-Trichlorobenzene	4.8	Not Detected	36	Not Detected
Hexachlorobutadiene	4.8	Not Detected	51	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	116	70-130
4-Bromofluorobenzene	101	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG115SG Lab Duplicate

Lab ID#: 0903220B-10AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d031211**	**Date of Collection: 3/3/09 10:00:00 AM**	
Dil. Factor:	**2.40**	**Date of Analysis: 3/12/09 06:28 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.2	Not Detected	5.9	Not Detected
Freon 114	1.2	Not Detected	8.4	Not Detected
Chloromethane	4.8	Not Detected	9.9	Not Detected
Vinyl Chloride	1.2	Not Detected	3.1	Not Detected
1,3-Butadiene	1.2	Not Detected	2.6	Not Detected
Bromomethane	1.2	Not Detected	4.7	Not Detected
Chloroethane	1.2	Not Detected	3.2	Not Detected
Freon 11	1.2	Not Detected	6.7	Not Detected
Ethanol	4.8	5.1	9.0	9.5
Freon 113	1.2	Not Detected	9.2	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Acetone	4.8	Not Detected	11	Not Detected
2-Propanol	4.8	Not Detected	12	Not Detected
Carbon Disulfide	1.2	Not Detected	3.7	Not Detected
3-Chloropropene	4.8	Not Detected	15	Not Detected
Methylene Chloride	1.2	Not Detected	4.2	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.3	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Hexane	1.2	Not Detected	4.2	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.8	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Tetrahydrofuran	1.2	1.3	3.5	3.8
Chloroform	1.2	Not Detected	5.8	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.5	Not Detected
Cyclohexane	1.2	Not Detected	4.1	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.6	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.6	Not Detected
Benzene	1.2	Not Detected	3.8	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.8	Not Detected
Heptane	1.2	Not Detected	4.9	Not Detected
Trichloroethene	1.2	Not Detected	6.4	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.5	Not Detected
1,4-Dioxane	4.8	Not Detected	17	Not Detected
Bromodichloromethane	1.2	Not Detected	8.0	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.4	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	4.9	Not Detected
Toluene	1.2	Not Detected	4.5	Not Detected
trans-1,3-Dichloropropene	1.2	Not Detected	5.4	Not Detected

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG115SG Lab Duplicate

Lab ID#: 0903220B-10AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d031211**	**Date of Collection: 3/3/09 10:00:00 AM**	
Dil. Factor:	**2.40**	**Date of Analysis: 3/12/09 06:28 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	1.2	Not Detected	6.5	Not Detected
Tetrachloroethene	1.2	6.5	8.1	44
2-Hexanone	4.8	Not Detected	20	Not Detected
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.2	Not Detected
Chlorobenzene	1.2	Not Detected	5.5	Not Detected
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
m,p-Xylene	1.2	Not Detected	5.2	Not Detected
o-Xylene	1.2	Not Detected	5.2	Not Detected
Styrene	1.2	Not Detected	5.1	Not Detected
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	5.9	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.2	Not Detected
Propylbenzene	1.2	Not Detected	5.9	Not Detected
4-Ethyltoluene	1.2	Not Detected	5.9	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	5.9	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	5.9	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.2	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
1,2,4-Trichlorobenzene	4.8	Not Detected	36	Not Detected
Hexachlorobutadiene	4.8	Not Detected	51	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	118	70-130
4-Bromofluorobenzene	104	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG116SG

Lab ID#: 0903220B-11A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d031210**	**Date of Collection:**	**3/3/09 10:50:00 AM**
Dil. Factor:	**2.50**	**Date of Analysis:**	**3/12/09 05:13 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.2	1.3	6.2	6.6
Freon 114	1.2	Not Detected	8.7	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
1,3-Butadiene	1.2	Not Detected	2.8	Not Detected
Bromomethane	1.2	Not Detected	4.8	Not Detected
Chloroethane	1.2	Not Detected	3.3	Not Detected
Freon 11	1.2	Not Detected	7.0	Not Detected
Ethanol	5.0	Not Detected	9.4	Not Detected
Freon 113	1.2	Not Detected	9.6	Not Detected
1,1-Dichloroethene	1.2	Not Detected	5.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	5.0	Not Detected	12	Not Detected
Carbon Disulfide	1.2	Not Detected	3.9	Not Detected
3-Chloropropene	5.0	Not Detected	16	Not Detected
Methylene Chloride	1.2	Not Detected	4.3	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.5	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	5.0	Not Detected
Hexane	1.2	Not Detected	4.4	Not Detected
1,1-Dichloroethane	1.2	Not Detected	5.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	Not Detected	3.7	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	5.0	Not Detected
Tetrahydrofuran	1.2	2.3	3.7	6.8
Chloroform	1.2	Not Detected	6.1	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.8	Not Detected
Cyclohexane	1.2	Not Detected	4.3	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.9	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.8	Not Detected
Benzene	1.2	Not Detected	4.0	Not Detected
1,2-Dichloroethane	1.2	Not Detected	5.0	Not Detected
Heptane	1.2	Not Detected	5.1	Not Detected
Trichloroethene	1.2	Not Detected	6.7	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.8	Not Detected
1,4-Dioxane	5.0	Not Detected	18	Not Detected
Bromodichloromethane	1.2	Not Detected	8.4	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.7	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	5.1	Not Detected
Toluene	1.2	2.1	4.7	8.0
trans-1,3-Dichloropropene	1.2	Not Detected	5.7	Not Detected

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 094AG116SG

Lab ID#: 0903220B-11A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d031210**	**Date of Collection: 3/3/09 10:50:00 AM**	
Dil. Factor:	**2.50**	**Date of Analysis: 3/12/09 05:13 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	1.2	Not Detected	6.8	Not Detected
Tetrachloroethene	1.2	310	8.5	2100
2-Hexanone	5.0	Not Detected	20	Not Detected
Dibromochloromethane	1.2	Not Detected	11	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.6	Not Detected
Chlorobenzene	1.2	Not Detected	5.8	Not Detected
Ethyl Benzene	1.2	Not Detected	5.4	Not Detected
m,p-Xylene	1.2	Not Detected	5.4	Not Detected
o-Xylene	1.2	Not Detected	5.4	Not Detected
Styrene	1.2	Not Detected	5.3	Not Detected
Bromoform	1.2	Not Detected	13	Not Detected
Cumene	1.2	Not Detected	6.1	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.6	Not Detected
Propylbenzene	1.2	Not Detected	6.1	Not Detected
4-Ethyltoluene	1.2	Not Detected	6.1	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	6.1	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	6.1	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	7.5	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.5	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.5	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.5	Not Detected
1,2,4-Trichlorobenzene	5.0	Not Detected	37	Not Detected
Hexachlorobutadiene	5.0	Not Detected	53	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	116	70-130
4-Bromofluorobenzene	102	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0903220B-12A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d031205**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/12/09 11:41 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0903220B-12A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d031205**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/12/09 11:41 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	112	70-130
4-Bromofluorobenzene	98	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0903220B-12B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**y031505**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/15/09 03:31 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0903220B-12B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**y031505**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/15/09 03:31 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	124	70-130
4-Bromofluorobenzene	109	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0903220B-13A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d031202**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/12/09 09:38 AM**	

Compound	%Recovery
Freon 12	110
Freon 114	108
Chloromethane	103
Vinyl Chloride	105
1,3-Butadiene	109
Bromomethane	140 Q
Chloroethane	103
Freon 11	109
Ethanol	109
Freon 113	107
1,1-Dichloroethene	105
Acetone	106
2-Propanol	98
Carbon Disulfide	107
3-Chloropropene	109
Methylene Chloride	105
Methyl tert-butyl ether	80
trans-1,2-Dichloroethene	103
Hexane	106
1,1-Dichloroethane	108
2-Butanone (Methyl Ethyl Ketone)	108
cis-1,2-Dichloroethene	104
Tetrahydrofuran	102
Chloroform	107
1,1,1-Trichloroethane	112
Cyclohexane	103
Carbon Tetrachloride	110
2,2,4-Trimethylpentane	103
Benzene	100
1,2-Dichloroethane	108
Heptane	103
Trichloroethene	103
1,2-Dichloropropane	104
1,4-Dioxane	100
Bromodichloromethane	111
cis-1,3-Dichloropropene	108
4-Methyl-2-pentanone	110
Toluene	102
trans-1,3-Dichloropropene	115

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0903220B-13A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d031202**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/12/09 09:38 AM**	

Compound	%Recovery
1,1,2-Trichloroethane	105
Tetrachloroethene	105
2-Hexanone	108
Dibromochloromethane	113
1,2-Dibromoethane (EDB)	109
Chlorobenzene	103
Ethyl Benzene	105
m,p-Xylene	106
o-Xylene	106
Styrene	107
Bromoform	110
Cumene	106
1,1,2,2-Tetrachloroethane	103
Propylbenzene	110
4-Ethyltoluene	105
1,3,5-Trimethylbenzene	105
1,2,4-Trimethylbenzene	104
1,3-Dichlorobenzene	100
1,4-Dichlorobenzene	100
alpha-Chlorotoluene	108
1,2-Dichlorobenzene	98
1,2,4-Trichlorobenzene	100
Hexachlorobutadiene	102

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	99	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0903220B-13B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**y031504**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/15/09 02:17 AM**	

Compound	%Recovery
Freon 12	113
Freon 114	112
Chloromethane	103
Vinyl Chloride	103
1,3-Butadiene	114
Bromomethane	103
Chloroethane	104
Freon 11	120
Ethanol	118
Freon 113	115
1,1-Dichloroethene	112
Acetone	103
2-Propanol	112
Carbon Disulfide	103
3-Chloropropene	108
Methylene Chloride	103
Methyl tert-butyl ether	77
trans-1,2-Dichloroethene	101
Hexane	107
1,1-Dichloroethane	109
2-Butanone (Methyl Ethyl Ketone)	103
cis-1,2-Dichloroethene	109
Tetrahydrofuran	107
Chloroform	109
1,1,1-Trichloroethane	124
Cyclohexane	103
Carbon Tetrachloride	126
2,2,4-Trimethylpentane	105
Benzene	98
1,2-Dichloroethane	122
Heptane	106
Trichloroethene	108
1,2-Dichloropropane	102
1,4-Dioxane	107
Bromodichloromethane	121
cis-1,3-Dichloropropene	118
4-Methyl-2-pentanone	117
Toluene	103
trans-1,3-Dichloropropene	119

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0903220B-13B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**y031504**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/15/09 02:17 AM**	

Compound	%Recovery
1,1,2-Trichloroethane	97
Tetrachloroethene	105
2-Hexanone	108
Dibromochloromethane	116
1,2-Dibromoethane (EDB)	102
Chlorobenzene	104
Ethyl Benzene	101
m,p-Xylene	102
o-Xylene	103
Styrene	115
Bromoform	124
Cumene	103
1,1,2,2-Tetrachloroethane	97
Propylbenzene	104
4-Ethyltoluene	105
1,3,5-Trimethylbenzene	93
1,2,4-Trimethylbenzene	92
1,3-Dichlorobenzene	116
1,4-Dichlorobenzene	115
alpha-Chlorotoluene	120
1,2-Dichlorobenzene	115
1,2,4-Trichlorobenzene	130
Hexachlorobutadiene	130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	112	70-130
4-Bromofluorobenzene	110	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0903220B-14A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d031203**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/12/09 10:10 AM**	

Compound	%Recovery
Freon 12	110
Freon 114	108
Chloromethane	105
Vinyl Chloride	109
1,3-Butadiene	109
Bromomethane	157 Q
Chloroethane	112
Freon 11	110
Ethanol	87
Freon 113	123
1,1-Dichloroethene	119
Acetone	113
2-Propanol	108
Carbon Disulfide	110
3-Chloropropene	113
Methylene Chloride	115
Methyl tert-butyl ether	109
trans-1,2-Dichloroethene	107
Hexane	112
1,1-Dichloroethane	115
2-Butanone (Methyl Ethyl Ketone)	115
cis-1,2-Dichloroethene	110
Tetrahydrofuran	105
Chloroform	113
1,1,1-Trichloroethane	117
Cyclohexane	108
Carbon Tetrachloride	114
2,2,4-Trimethylpentane	107
Benzene	105
1,2-Dichloroethane	112
Heptane	108
Trichloroethene	107
1,2-Dichloropropane	107
1,4-Dioxane	105
Bromodichloromethane	115
cis-1,3-Dichloropropene	110
4-Methyl-2-pentanone	116
Toluene	111
trans-1,3-Dichloropropene	117

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0903220B-14A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d031203**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/12/09 10:10 AM**	

Compound	%Recovery
1,1,2-Trichloroethane	109
Tetrachloroethene	108
2-Hexanone	111
Dibromochloromethane	115
1,2-Dibromoethane (EDB)	107
Chlorobenzene	106
Ethyl Benzene	106
m,p-Xylene	106
o-Xylene	108
Styrene	107
Bromoform	111
Cumene	110
1,1,2,2-Tetrachloroethane	102
Propylbenzene	113
4-Ethyltoluene	108
1,3,5-Trimethylbenzene	103
1,2,4-Trimethylbenzene	103
1,3-Dichlorobenzene	100
1,4-Dichlorobenzene	99
alpha-Chlorotoluene	112
1,2-Dichlorobenzene	97
1,2,4-Trichlorobenzene	95
Hexachlorobutadiene	99

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	97	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0903220B-14B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**y031503**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/15/09 01:33 AM**	

Compound	%Recovery
Freon 12	115
Freon 114	108
Chloromethane	99
Vinyl Chloride	98
1,3-Butadiene	103
Bromomethane	98
Chloroethane	95
Freon 11	115
Ethanol	87
Freon 113	119
1,1-Dichloroethene	121
Acetone	110
2-Propanol	109
Carbon Disulfide	96
3-Chloropropene	101
Methylene Chloride	107
Methyl tert-butyl ether	58 Q
trans-1,2-Dichloroethene	97
Hexane	105
1,1-Dichloroethane	110
2-Butanone (Methyl Ethyl Ketone)	100
cis-1,2-Dichloroethene	114
Tetrahydrofuran	102
Chloroform	112
1,1,1-Trichloroethane	123
Cyclohexane	99
Carbon Tetrachloride	126
2,2,4-Trimethylpentane	102
Benzene	95
1,2-Dichloroethane	126
Heptane	102
Trichloroethene	106
1,2-Dichloropropane	98
1,4-Dioxane	99
Bromodichloromethane	119
cis-1,3-Dichloropropene	113
4-Methyl-2-pentanone	111
Toluene	104
trans-1,3-Dichloropropene	116

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0903220B-14B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**y031503**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/15/09 01:33 AM**	

Compound	%Recovery
1,1,2-Trichloroethane	94
Tetrachloroethene	103
2-Hexanone	96
Dibromochloromethane	116
1,2-Dibromoethane (EDB)	96
Chlorobenzene	100
Ethyl Benzene	98
m,p-Xylene	98
o-Xylene	100
Styrene	109
Bromoform	124
Cumene	103
1,1,2,2-Tetrachloroethane	97
Propylbenzene	104
4-Ethyltoluene	103
1,3,5-Trimethylbenzene	90
1,2,4-Trimethylbenzene	88
1,3-Dichlorobenzene	115
1,4-Dichlorobenzene	115
alpha-Chlorotoluene	122
1,2-Dichlorobenzene	115
1,2,4-Trichlorobenzene	130
Hexachlorobutadiene	129

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	114	70-130
4-Bromofluorobenzene	112	70-130

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager: Ben Mertich
Collected by: (Print and Sign): Ben Mertich
Company: DASIS Email: b.mertich@dasisvita.com
Address: City: State: Zip:
Phone: Fax:

Project Info:
P.O. # 14-139
Project #:
Project Name: 4th & Gamble II

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psig)
	094AG106AA	4241	3/2/09	0915	TO-15 LL	23	6		
	094AG107CS	34192		0930	TO-15 LL	29.5	5		
	094AG108CS	34267		0940	TO-15 LL	30	8		
06A	094AG109SG	11823		1705	TO-15	28	8		
	094AG110IA	5718		1745	TO-15LL	29	9		
	094AG111IA	34200		1800	TO-15LL	29	10		
07A	094AG112SG	22968		1820	TO-15	30	10.5		
	094AG113AA	926	↓	1530	TO-15LL	30	2		
09A	094AG114SG	12042	3/3/09	0930	TO-15	30	12		
10A	094AG115SG	34626	3/3/09	1000	TO-15	30	11		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Ben Mertich	3/5/09 0800	Monica Hooper ATL	3/9/09 910
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes:
No vacuum gauge provided. Initial and final vacuums are estimates that were taken using an imprecise gauge.

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals intact?	Work Order #
	Fed Ex		NA	Good	Yes No (None)	0903220

Form 125G rev.11

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager Ben Mahich
Collected by: (Print and Sign) Ben Mahich
Company OASIS Email b.mahich@oasisenviro.com
Address _____ City _____ State ____ Zip ____
Phone _____ Fax _____

Project Info:
P.O. # 14-139
Project # _____
Project Name 4th + Gambell

Turn Around Time:
☑ Normal
☐ Rush
_____ specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Inital	Final	Receipt	Final (psi)
01A	094AG116SG	35632	3/3/09	1050	TO-15	30	12.5		
	094AG117IA	14109	3/3/09	1745	TO-15LL	30	6		
	094AG118TB	—	—	—	TO-15LL	—	—		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time	Notes:
[signature]	3/5/09 0800	[signature]	3/5/09 915	
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time	
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time	

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	DA OK		NA	Good	Yes No (None)	09 03220

Form 1293 rev. 1

SGS North America Inc.
Alaska Division
Level II Laboratory Data Report

Project:	4th and Gambell
Client:	Oasis Environmental
SGS Work Order:	1090630

Released by:

Contents:

Note:
Unless otherwise noted, all quality assurance/quality control criteria is in compliance with the standards set forth by the proper regulatory authority, the SGS Quality Assurance Program Plan, and the National Environmental Accreditation Conference.

SGS Environmental Services Inc.

Case Narrative

Customer: OASISEN **Oasis Environmental**

Project: 1090630 **4th and Gambell**

Refer to the sample receipt form for information on sample condition.

884639 CCV **VMS/10389]**

8260B - ICV recovery for several analytes do not meet QC goals (biased high). These analytes were not detected above the PQL in the associated samples.

Laboratory Analytical Report

Client: **Oasis Environmental**
825 W. 8th Ave., Ste. 200
Anchorage, AK 99501

Attn: **Ben Martich**
T: (907)258-4880 F:(907)258-4033
b.martich@oasisenviro.com

Project: **4th and Gambell**

Workorder No.: **1090630**

Certification:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, other than the conditions noted on the sample data sheet(s) and/or the case narrative. This certification applies only to the tested parameters and the specific sample(s) received at the laboratory.

If you have any questions regarding this report, or if we can be of further assistance, please contact your SGS Project Manager.

Tamara Rentz
tamara.rentz@sgs.com
Project Manager

Print Date: 2/27/2009

Enclosed are the analytical results associated with this workorder.

As required by the state of Alaska and the USEPA, a formal Quality Assurance/Quality Control Program is maintained by SGS. A copy of our Quality Assurance Plan (QAP), which outlines this program is available at your request.

The Laboratory certification numbers are AK971-05 (DW), UTS-005 (CS) and AK00971 (Micro) for ADEC and AK100001 for NELAP (RCRA methods: 1020A, 1311, 6010B, 7470A, 7471A, 9040B, 9045C, 9056, 9060, 8015B, 8021B, 8081A/8082, 8260B, 8270C).

Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP, the National Environmental Laboratory Accreditation Program and, when applicable, other regulatory authorities.

If you have any questions regarding this report or if we can be of any assistance, please contact your SGS Project Manager at 907-562-2343. All work is being provided under SGS general terms and conditions (http://www.sgs.com/terms_and_conditions.htm)

The following descriptors may be found on your report which will serve to further qualify the data.

MDL	Method Detection Limit
PQL	Practical Quantitation Limit (reporting limit).
CL	Control Limit
U	Indicates the analyte was analyzed for but not detected.
F	Indicates value that is greater than or equal to the MDL.
J	The quantitation is an estimation.
ND	Indicates the analyte is not detected
B	Indicates the analyte is found in a blank associated with the sample.
*	The analyte has exceeded allowable regulatory or control limits.
D	The analyte concentration is the result of dilution.
GT	Greater Than
LT	Less Than
Q	QC parameter out of acceptance range.
M	A matrix effect was present.
E	The analyte result is above the calibrated range.
R	Rejected
DF	Analytical Dilution Factor
JL	The analyte was positively identified, but the quantitation is a low estimation.
<Surr>	Surrogate QC spiked standard
<Surr/IS>	Surrogate / Internal Standard QC spiked standard
QC	Quality Control
QA	Quality Assurance
MB	Method Blank
LCS (D)	Laboratory Control Sample (Duplicate)
MS(D)	Matrix Spike (Duplicate)
BMS(D)	Site Specific Matrix Spike (Duplicate)
RPD	Relative Percent Difference
ICV	Initial Calibration Verification
CCV	Continuous Calibration Verification
MSA	Method of Standard Addition

Notes: Soil samples are reported on a dry weight basis unless otherwise specified
All DRO/RRO analyses are integrated per SOP.

SAMPLE SUMMARY

Print Date: 2/27/2009 12:52 pm

Client Name: Oasis Environmental
Project Name: 4th and Gambell
Workorder No.: 1090630

Analytical Methods

Method Description	Analytical Method
Percent Solids SM2540G	SM20 2540G
TCLP Full Characterization	TCLP
TCLP Volatile Organic Compounds 8260	SW8260B TCLP

Sample ID Cross Reference

Lab Sample ID	Client Sample ID
1090630001	094AG101SB
1090630002	094AG102SB
1090630003	094AG103SB
1090630004	094AG104SB
1090630005	094AG105SB

Client Sample ID: **094AG101SB**
SGS Ref. #: 1090630001
Project ID: 4th and Gambell
Matrix: Soil/Solid (dry weight)
Percent Solids: 96.2

Collection Date/Time: 02/18/09 13:15
Receipt Date/Time: 02/18/09 16:15

Solids

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Solids	96.2			%	1	SPT7879		

Batch Information

Analytical Batch: SPT7879
Analytical Method: SM20 2540G
Analysis Date/Time: 02/20/09 13:45
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL

Container ID:1090630001-A
Analyst: STB

SGS

Oasis Environmental

Print Date: 2/27/2009 12:52 pm

Client Sample ID: **094AG102SB**
SGS Ref. #: 1090630002
Project ID: 4th and Gambell
Matrix: Soil/Solid (dry weight)
Percent Solids: 95.3

Collection Date/Time: 02/18/09 13:30
Receipt Date/Time: 02/18/09 16:15

Solids

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Solids	95.3			%	1	SPT7879		

Batch Information

Analytical Batch: SPT7879
Analytical Method: SM20 2540G
Analysis Date/Time: 02/20/09 13:45
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL

Container ID:1090630002-A
Analyst: STB

Oasis Environmental Print Date: 2/27/2009 12:52 pm

Client Sample ID: **094AG103SB**
SGS Ref. #: 1090630003
Project ID: 4th and Gambell
Matrix: Soil/Solid (dry weight)
Percent Solids: 93.0

Collection Date/Time: 02/18/09 14:15
Receipt Date/Time: 02/18/09 16:15

Solids

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Solids	93.0			%	1	SPT7879		

Batch Information

Analytical Batch: SPT7879
Analytical Method: SM20 2540G
Analysis Date/Time: 02/20/09 13:45
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL

Container ID:1090630003-A
Analyst: STB

SGS

Oasis Environmental Print Date: 2/27/2009 12:52 pm

Client Sample ID: **094AG104SB**
SGS Ref. #: 1090630004
Project ID: 4th and Gambell
Matrix: Soil/Solid (dry weight)
Percent Solids: 92.5

Collection Date/Time: 02/18/09 14:45
Receipt Date/Time: 02/18/09 16:15

Solids

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Solids	92.5			%	1	SPT7879		

Batch Information

Analytical Batch: SPT7879
Analytical Method: SM20 2540G
Analysis Date/Time: 02/20/09 13:45
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL

Container ID:1090630004-A
Analyst: STB

Oasis Environmental Print Date: 2/27/2009 12:52 pm

Client Sample ID: **094AG105SB**
SGS Ref. #: 1090630005
Project ID: 4th and Gambell
Matrix: Solid/Soil (Wet Weight)

Collection Date/Time: 02/18/09 15:00
Receipt Date/Time: 02/18/09 16:15

Characterization

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Aqueous Phase, Total	0.0			%	1	TCLP5321		
Oil Phase, Total	0.0			%	1	TCLP5321		
Solid Phase, Total	100			%	1	TCLP5321		

Batch Information

Analytical Batch: TCLP5321
Analytical Method: TCLP
Analysis Date/Time: 02/19/09 15:15
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID:1090630005-A
Analyst: BJS

SGS

Oasis Environmental Print Date: 2/27/2009 12:52 pm

Client Sample ID: **094AG105SB**
SGS Ref. #: 1090630005
Project ID: 4th and Gambell
Matrix: Solid/Soil (Wet Weight)

Collection Date/Time: 02/18/09 15:00
Receipt Date/Time: 02/18/09 16:15

TCLP Volatiles GC/MS

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
1,1-Dichloroethene	ND	0.200	0.0620	mg/L	200	VMS10389	VXX19226	
1,2-Dichloroethane	ND	0.100	0.0300	mg/L	200	VMS10389	VXX19226	
1,4-Dichlorobenzene	ND	0.100	0.0300	mg/L	200	VMS10389	VXX19226	
2-Butanone (MEK)	ND	2.00	0.620	mg/L	200	VMS10390	VXX19227	
Benzene	ND	0.0800	0.0240	mg/L	200	VMS10389	VXX19226	
Carbon tetrachloride	ND	0.200	0.0620	mg/L	200	VMS10389	VXX19226	
Chlorobenzene	ND	0.100	0.0300	mg/L	200	VMS10389	VXX19226	
Chloroform	ND	0.200	0.0600	mg/L	200	VMS10389	VXX19226	
Hexachlorobutadiene	ND	0.200	0.0620	mg/L	200	VMS10389	VXX19226	
Tetrachloroethene	ND	0.200	0.0620	mg/L	200	VMS10389	VXX19226	
Trichloroethene	ND	0.200	0.0620	mg/L	200	VMS10389	VXX19226	
Vinyl chloride	ND	0.200	0.0620	mg/L	200	VMS10389	VXX19226	
1,2-Dichloroethane-D4 <surr>	99.5	73-120		%	200	VMS10389	VXX19226	
4-Bromofluorobenzene <surr>	106	76-120		%	200	VMS10389	VXX19226	
Toluene-d8 <surr>	98.8	80-120		%	200	VMS10389	VXX19226	

Batch Information

Analytical Batch: VMS10389
Analytical Method: SW8260B TCLP
Analysis Date/Time: 02/25/09 20:29
Dilution Factor: 200

Prep Batch: VXX19226
Prep Method: SW5030B
Prep Date/Time: 02/25/09 12:46

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1090630005-A
Analyst: DSH

Analytical Batch: VMS10390
Analytical Method: SW8260B TCLP
Analysis Date/Time: 02/26/09 16:02
Dilution Factor: 200

Prep Batch: VXX19227
Prep Method: SW5030B
Prep Date/Time: 02/26/09 11:06

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1090630005-A
Analyst: DSH

SGS

SGS Ref.#	883940	Method Blank	**Printed Date/Time**	02/27/2009 12:52
Client Name	Oasis Environmental		**Prep Batch**	
Project Name/#	4th and Gambell		**Method**	
Matrix	Soil/Solid (dry weight)		**Date**	

QC results affect the following production samples:

1090630001, 1090630002, 1090630003, 1090630004

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
Solids					
Total Solids	99.9			%	02/20/09
Batch SPT7879					
Method SM20 2540G					
Instrument					

SGS

SGS Ref.#	884449 Leaching Blank	**Printed Date/Time**	02/27/2009 12:52
Client Name	Oasis Environmental	**Prep Batch**	VXX19226
Project Name/#	4th and Gambell	**Method**	SW5030B
Matrix	Water (Surface, Eff., Ground)	**Date**	02/25/2009

QC results affect the following production samples:

1090630005

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
TCLP Volatiles GC/MS					
1,1-Dichloroethene	ND	0.200	0.0620	mg/L	02/25/09
1,2-Dichloroethane	ND	0.100	0.0300	mg/L	02/25/09
1,4-Dichlorobenzene	ND	0.100	0.0300	mg/L	02/25/09
Benzene	ND	0.0800	0.0240	mg/L	02/25/09
Carbon tetrachloride	ND	0.200	0.0620	mg/L	02/25/09
Chlorobenzene	ND	0.100	0.0300	mg/L	02/25/09
Chloroform	ND	0.200	0.0600	mg/L	02/25/09
Hexachlorobutadiene	ND	0.200	0.0620	mg/L	02/25/09
Tetrachloroethene	ND	0.200	0.0620	mg/L	02/25/09
Trichloroethene	ND	0.200	0.0620	mg/L	02/25/09
Vinyl chloride	ND	0.200	0.0620	mg/L	02/25/09
Surrogates					
1,2-Dichloroethane-D4 <surr>	102	73-120		%	02/25/09
4-Bromofluorobenzene <surr>	105	76-120		%	02/25/09
Toluene-d8 <surr>	98.9	80-120		%	02/25/09

Batch VMS10389
Method SW8260B TCLP
Instrument HP 5890 Series II MS3 VNA

SGS

SGS Ref.#	884635 Method Blank	**Printed Date/Time**	02/27/2009 12:52
Client Name	Oasis Environmental	**Prep Batch**	VXX19226
Project Name/#	4th and Gambell	**Method**	SW5030B
Matrix	Water (Surface, Eff., Ground)	**Date**	02/25/2009

QC results affect the following production samples:

1090630005

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy					
Benzene	ND	0.000400	0.000120	mg/L	02/25/09
1,4-Dichlorobenzene	ND	0.000500	0.000150	mg/L	02/25/09
1,2-Dichloroethane	ND	0.000500	0.000150	mg/L	02/25/09
Chlorobenzene	ND	0.000500	0.000150	mg/L	02/25/09
Tetrachloroethene	ND	0.00100	0.000310	mg/L	02/25/09
Carbon tetrachloride	ND	0.00100	0.000310	mg/L	02/25/09
Chloroform	ND	0.00100	0.000300	mg/L	02/25/09
Vinyl chloride	ND	0.00100	0.000310	mg/L	02/25/09
1,1-Dichloroethene	ND	0.00100	0.000310	mg/L	02/25/09
Trichloroethene	ND	0.00100	0.000310	mg/L	02/25/09
Hexachlorobutadiene	ND	0.00100	0.000310	mg/L	02/25/09
Surrogates					
1,2-Dichloroethane-D4 <surr>	107	73-120		%	02/25/09
Toluene-d8 <surr>	99.2	80-120		%	02/25/09
4-Bromofluorobenzene <surr>	107	76-120		%	02/25/09

Batch VMS10389
Method SW8260B TCLP
Instrument HP 5890 Series II MS3 VNA

SGS

SGS Ref.#	884640 Method Blank	**Printed Date/Time**	02/27/2009 12:52
Client Name	Oasis Environmental	**Prep Batch**	VXX19227
Project Name/#	4th and Gambell	**Method**	SW5030B
Matrix	Water (Surface, Eff., Ground)	**Date**	02/26/2009

QC results affect the following production samples:

1090630005

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy					
2-Butanone (MEK)	ND	0.0100	0.00310	mg/L	02/26/09
Surrogates					
1,2-Dichloroethane-D4 <surr>	102	73-120		%	02/26/09
Toluene-d8 <surr>	101	80-120		%	02/26/09
4-Bromofluorobenzene <surr>	108	76-120		%	02/26/09

Batch VMS10390
Method SW8260B TCLP
Instrument HP 5890 Series II MS3 VNA

SGS

SGS Ref.#	883941	Duplicate	**Printed Date/Time**	02/27/2009 12:52
Client Name	Oasis Environmental		**Prep Batch**	
Project Name/#	4th and Gambell		**Method**	
Original	1090630001		**Date**	
Matrix	Soil/Solid (dry weight)			

QC results affect the following production samples:
1090630001, 1090630002, 1090630003, 1090630004

Parameter	Original Result	QC Result	Units	RPD	RPD Limits	Analysis Date
Solids						
Total Solids	96.2	96.3	%	0	(< 15)	02/20/2009
Batch SPT7879						
Method SM20 2540G						
Instrnment						

SGS

SGS Ref.#	884636	Lab Control Sample	**Printed Date/Time**	02/27/2009	12:52
	884637	Lab Control Sample Duplicate	**Prep Batch**	VXX19226	
Client Name	Oasis Environmental		**Method**	SW5030B	
Project Name/#	4th and Gambell		**Date**	02/25/2009	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1090630005

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
Benzene	LCS	0.0301	100	(80-120)			0.0300 mg/L	02/25/2009
	LCSD	0.0299	100		0	(< 20)	0.0300 mg/L	02/25/2009
1,4-Dichlorobenzene	LCS	0.0295	98	(80-120)			0.0300 mg/L	02/25/2009
	LCSD	0.0292	97		1	(< 20)	0.0300 mg/L	02/25/2009
1,2-Dichloroethane	LCS	0.0264	88	(80-129)			0.0300 mg/L	02/25/2009
	LCSD	0.0253	84		4	(< 20)	0.0300 mg/L	02/25/2009
Chlorobenzene	LCS	0.0303	101	(80-120)			0.0300 mg/L	02/25/2009
	LCSD	0.0300	100		1	(< 20)	0.0300 mg/L	02/25/2009
Tetrachloroethene	LCS	0.0293	98	(79-122)			0.0300 mg/L	02/25/2009
	LCSD	0.0281	94		4	(< 20)	0.0300 mg/L	02/25/2009
Carbon tetrachloride	LCS	0.0283	95	(80-126)			0.0300 mg/L	02/25/2009
	LCSD	0.0280	93		1	(< 20)	0.0300 mg/L	02/25/2009
Chloroform	LCS	0.0277	92	(80-124)			0.0300 mg/L	02/25/2009
	LCSD	0.0278	93		0	(< 20)	0.0300 mg/L	02/25/2009
Vinyl chloride	LCS	0.0323	108	(72-145)			0.0300 mg/L	02/25/2009
	LCSD	0.0339	113		5	(< 20)	0.0300 mg/L	02/25/2009
1,1-Dichloroethene	LCS	0.0314	105	(76-130)			0.0300 mg/L	02/25/2009
	LCSD	0.0323	108		3	(< 20)	0.0300 mg/L	02/25/2009
Trichloroethene	LCS	0.0291	97	(80-125)			0.0300 mg/L	02/25/2009
	LCSD	0.0285	95		2	(< 20)	0.0300 mg/L	02/25/2009
Hexachlorobutadiene	LCS	0.0297	99	(77-125)			0.0300 mg/L	02/25/2009
	LCSD	0.0290	97		3	(< 20)	0.0300 mg/L	02/25/2009
Surrogates								
1,2-Dichloroethane-D4 <surr>	LCS		89	(73-120)				02/25/2009
	LCSD		86		3			02/25/2009
Toluene-d8 <surr>	LCS		97	(80-120)				02/25/2009

SGS

SGS Ref.#	884636	Lab Control Sample	**Printed Date/Time**	02/27/2009	12:52
	884637	Lab Control Sample Duplicate	**Prep Batch**	VXX19226	
Client Name	Oasis Environmental		**Method**	SW5030B	
Project Name/#	4th and Gambell		**Date**	02/25/2009	
Matrix	Water (Surface, Eff., Ground)				

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy							
	LCSD	97		0			02/25/2009
4-Bromofluorobenzene <surr>	LCS	96	(76-120)				02/25/2009
	LCSD	98		2			02/25/2009

Batch	VMS10389
Method	SW8260B TCLP
Instrument	HP 5890 Series II MS3 VNA

SGS

SGS Ref.#	884641	Lab Control Sample	**Printed Date/Time**	02/27/2009	12:52
	884642	Lab Control Sample Duplicate	**Prep Batch**	VXX19227	
Client Name	Oasis Environmental		**Method**	SW5030B	
Project Name/#	4th and Gambell		**Date**	02/26/2009	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1090630005

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
2-Butanone (MEK)	LCS	0.101	113	(66-136)			0.0900 mg/L	02/26/2009
	LCSD	0.104	115		2	(< 20)	0.0900 mg/L	02/26/2009
Surrogates								
1,2-Dichloroethane-D4 <surr>	LCS		100	(73-120)				02/26/2009
	LCSD		100		0			02/26/2009
Toluene-d8 <surr>	LCS		100	(80-120)				02/26/2009
	LCSD		100		0			02/26/2009
4-Bromofluorobenzene <surr>	LCS		96	(76-120)				02/26/2009
	LCSD		98		2			02/26/2009

Batch	VMS10390
Method	SW8260B TCLP
Instrument	HP 5890 Series II MS3 VNA

SGS

CHAIN OF CUSTODY RECORD
SGS Environmental Services Inc.

1090630

080544

(1)

CLIENT: OASIS Environmental

CONTACT: Ben Martich PHONE NO:(907) 258-4880

PROJECT: 4th and Gambell SITE/PWSID# :

REPORTS TO: 825 W. 8th Ave. Anchorage AK 99501 E-MAIL: b.martich@oasisenvir.com FAX NO.:(907) 258-4033

INVOICE TO: Same QUOTE # P.O. NUMBER 14-139

SGS Reference:

PAGE 1 OF 1

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C=COMP G=GRAB)	Preservatives Used	Analysis Required (3) Percent Moisture	TCLP VOCs	REMARKS
1 A	Ø94AG1Ø1SB	2/18/09	1315	SO	1	G		X		
2	Ø94AG1Ø2SB		1330					X		
3	Ø94AG1Ø3SB		1415					X		
4	Ø94AG1Ø4SB		1445					X		
5	Ø94AG1Ø5SB		1500			C			X	

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:	Date	Time
Julie Clark	2/18/09	1615			
Relinquished By: (2)	Date	Time	Received By:	Date	Time
Relinquished By: (3)	Date	Time	Received By:	Date	Time
Relinquished By: (4)	Date	Time	Received By:	Date	Time
				2/19/09	1615

(4)

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) YES NO

69d C > 8.6 TB = 3.6

Temperature /C:_____ T_____

Special Deliverable Requirements:

Chain of Custody Seal: (Circle)

INTACT BROKEN ABSENT

Special Instructions:

Requested Turnaround Time:

☐ RUSH _____ Date Needed ☒ STD

☐ 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
☐ 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557
☐ 1270 Greenbrier Street Charleston, WV 25311 Tel: (304) 346-0725 Fax: (304) 346-0761

White - Retained by Lab
Yellow - Returned with Report
Pink - Retained by Sampler

SGS

1090630

SAMPLE RECEIPT FORM

SGS WO#:

Yes	No	NA		
___	✓	___	Are samples **RUSH**, priority or *w/in 72 hrs* of **hold** time?	
___	___	✓	If yes, have you done *e-mail ALERT notification*?	
___	✓	___	Are samples *within 24 hrs.* of **hold time** or **due date**?	
___	___	✓	If yes, have you also *spoken with* supervisor?	
___	___	✓	Archiving bottles (if req'd): Are they properly marked?	
___	✓	___	Are there any **problems**? PM Notified? ___	
___	___	✓	Were samples preserved correctly and pH verified?	
			___	
			___	
			___	
___	___	✓	If this is for PWS, provide **PWSID.** ___	
___	✓	___	Will courier charges apply?	
			Method of payment? ___	
___	✓	___	Data package required? (Level: 1 / 2 / 3 / 4)	
			Notes: ___	
___	✓	___	Is this a DoD project? (USACE, Navy, AFCEE)	

TAT (circle one): (Standard) -or- Rush

Received Date: 2.18.09

Received Time: 1615

Is **date/time conversion** necessary? no

# of hours to AK Local Time: ___

Thermometer ID: 69

Cooler ID	Temp Blank	Cooler Temp
1	8.6 °C	3.4 °C
	°C	°C
	°C	°C
	°C	°C
	°C	°C
	°C	°C

Note: Temperature readings include thermometer correction factors

Delivery method (circle all that apply): (Client) / Alert Courier / UPS / FedEx / USPS / DHL / AA Goldstreak / NAC / ERA / PenAir / Carlile/ Lynden / SGS / Other: ___

Airbill # ___

Additional Sample Remarks: (✓*if applicable*)

___ Extra Sample Volume?
___ Limited Sample Volume?
___ MeOH field preserved for volatiles?
___ Field-filtered for dissolved ___
___ Lab-filtered for dissolved ___
___ Ref Lab required? ___
___ Foreign Soil?

This section must be filled out for DoD projects (USACE, Navy, AFCEE)

Yes	No	
___	___	Is received temperature 4 ± 2°C? Exceptions: ___ Samples/Analyses Affected: ___
___	___	If temperature(s) <0 °C, were containers ice-free? N/A *Notify PM immediately of any ice in samples*
___	___	Was there an airbill? *(Note # above in the right hand column)*
___	___	Was cooler sealed with custody seals? # / where: ___
___	___	Were seal(s) intact upon arrival?
___	___	Was there a COC with cooler?
___	___	Was COC sealed in plastic bag & taped inside lid of cooler?
___	___	Was the COC filled out properly?
___	___	Did the COC indicate USACE / Navy / AFCEE project?
___	___	Did the COC and samples correspond?
___	___	Were all sample packed to prevent breakage? Packing material: ___
___	___	Were all samples unbroken and clearly labeled?
___	___	Were all samples sealed in separate plastic bags?
___	___	Were all VOCs free of headspace and/or MeOH preserved?
___	___	Were correct container / sample sizes submitted?
___	___	Is sample condition good?
___	___	Was copy of CoC, SRF, and custody seals given to PM to fax?

This section must be filled if problems are found.

Yes	No	
___	___	Was client notified of problems?

Individual contacted: ___
Via: Phone / Fax / Email (*circle one*)
Date/Time: ___
Reason for contact: ___

Change Order Required? ___
SGS Contact: ___

Notes: ___

Completed by (sign): ___ **(print):** Lisa McCarty

Login proof (check one): waived ___ required ___ performed by: ___

SGS

1090630

SAMPLE RECEIPT FORM (page 2)

SGS WO#:

#	Container ID	Matrix	Test	QC	TB	Container Volume: 1 L	500 mL	250 mL	125 mL	60 mL	40 mL	8oz (250 mL)	4oz (125 mL)	Other	Container Type: AG	CG	HDPE	Nalgene	Cubie	Coli	Septa	Other	Preservative: None	HCl	HNO_3	H_2SO_4	MeOH	$Na_2S_2O_3$	NaOH	Other
1-4	A	2	% Moisture										4		✓						✓		✓							
5	A		TCLP VOC										1		✓								✓							
Bottle Totals													5																	

Completed by: _____ Date: 9.18.09

Form # F004r16 revised 03/10/08

1090630

SGS Environmental

CUSTODY SEAL

Signature: Julie Clark Date/Time: 2/18/09 @ 1615

SGS Environmental

CUSTODY SEAL

Signature: Julie Clark Date/Time: 2/18/09 @ 1615

SGS Environmental Services

TCLP SAMPLE CHARACTERIZATION

HSN#: 0680 - 5A ***Date:*** 2/19/09 1525 ***Analyst:*** STB

Sample Vol. (mL): 120 Container Volume (mL): 120

Top _____ % (xylene miscible) Description / Notes: _____

Middle _____ % (water miscible) Description / Notes: _____

Bottom 100 % (solids) Description / Notes: Brown dirt w/ rocks

Percent Solids Determination:

Original Sample & Container weight (g):		Solid % of sample:	
Empty Original Container weight (g):		Liquid % of sample:	
Clean Container weight (g):		Weight solids extracted (g):	
Original Sample weight (g):		Extraction Fluid:	
Filter weight (g):		Vol. Original Liquid Added Back (mL)	
Clean Container & Liquid weight (g):		Liquid Volume (mL):	
Liquid weight (g):			
Filter & Solid Sample weight (g):			
Solid weight (g):			

Notes: _____

HSN#: _____ ***Date:*** _____ ***Analyst:*** _____

Sample Volume (mL): _____ Container Volume (mL): _____

Top _____ % (xylene miscible) Description / Notes: _____

Middle _____ % (water miscible) Description / Notes: _____

Bottom _____ % (solids) Description / Notes: _____

Percent Solids Determination:

Original Sample & Container weight (g):		Solid % of sample:	
Empty Original Container weight (g):		Liquid % of sample:	
Clean Container weight (g):		Weight solids extracted (g):	
Original Sample weight (g):		Extraction Fluid:	
Filter weight (g):		Vol. Original Liquid Added Back (mL)	
Clean Container & Liquid weight (g):		Liquid Volume (mL):	
Liquid weight (g):			
Filter & Solid Sample weight (g):			
Solid weight (g):			

Notes: _____

Air Toxics LTD.
Laboratory Services Since 1989

6/25/2009

Mr. Ben Martich
Oasis Environmental, Inc.
825 W. 8th Avenue
Suite 200
Anchorage AK 99501

Project Name: 4th + Gambell
Project #: 14-139
Workorder #: 0906342A

Dear Mr. Ben Martich

The following report includes the data for the above referenced project for sample(s) received on 6/16/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for you air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kelly Buettner
Project Manager

Air Toxics LTD.
Laboratory Services Since 1989

WORK ORDER #: 0906342A

Work Order Summary

CLIENT:	Mr. Ben Martich Oasis Environmental, Inc. 825 W. 8th Avenue Suite 200 Anchorage, AK 99501	**BILL TO:**	Mr. Ben Martich Oasis Environmental, Inc. 825 W. 8th Avenue Suite 200 Anchorage, AK 99501
PHONE:	907-258-4880	**P.O. #**	
FAX:		**PROJECT #**	14-139 4th + Gambell
DATE RECEIVED:	06/16/2009	**CONTACT:**	Kelly Buettner
DATE COMPLETED:	06/24/2009		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	094AG121AA	Modified TO-15	24.5 "Hg	5 psi
02A	094AG122AA	Modified TO-15	24.0 "Hg	5 psi
03A	094AG123CS	Modified TO-15	5.0 "Hg	5 psi
04A	094AG124CS	Modified TO-15	4.5 "Hg	5 psi
05A	094AG125IA	Modified TO-15	9.5 "Hg	5 psi
06A	094AG126IA	Modified TO-15	5.5 "Hg	5 psi
07A	094AG127IA	Modified TO-15	5.5 "Hg	5 psi
13A	094AG133TB	Modified TO-15	28.0 "Hg	5 psi
14A	Lab Blank	Modified TO-15	NA	NA
15A	CCV	Modified TO-15	NA	NA
16A	LCS	Modified TO-15	NA	NA

CERTIFIED BY: _____ DATE: 06/25/09

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/08, Expiration date: 06/30/09
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
Oasis Environmental, Inc.
Workorder# 0906342A

Eight 6 Liter Summa Canister (100% Certified) samples were received on June 16, 2009. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	*TO-15*	*ATL Modifications*
ICAL %RSD acceptance criteria	+- 30% RSD with 2 compounds allowed out to < 40% RSD	30% RSD with 4 compounds allowed out to < 40% RSD
Daily Calibration	+- 30% Difference	</= 30% Difference with four allowed out up to </=40%.; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request

Receiving Notes

Samples 094AG121AA and 094AG122AA were received with significant vacuum remaining in the canister. The residual canister vacuum resulted in elevated reporting limits.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the reporting limit.
UJ- Non-detected compound associated with low bias in the CCV
N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: 094AG121AA

Lab ID#: 0906342A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	3.6	5.7	8.7	14
2-Butanone (Methyl Ethyl Ketone)	0.73	0.76	2.2	2.2
Benzene	0.73	0.86	2.3	2.7
Toluene	0.73	1.0	2.8	3.9

Client Sample ID: 094AG122AA

Lab ID#: 0906342A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	3.4	18	8.0	43
2-Butanone (Methyl Ethyl Ketone)	0.67	1.4	2.0	4.1
Benzene	0.67	0.94	2.1	3.0
Toluene	0.67	1.2	2.5	4.7

Client Sample ID: 094AG123CS

Lab ID#: 0906342A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.76	0.80	3.8
Chloromethane	0.16	0.49	0.33	1.0
1,3-Butadiene	0.16	0.81	0.36	1.8
Freon 11	0.16	0.28	0.90	1.6
Ethanol	0.80	130 E	1.5	240 E
Acetone	0.80	14	1.9	32
2-Propanol	0.80	1.2	2.0	3.0
Hexane	0.16	0.33	0.57	1.2
2-Butanone (Methyl Ethyl Ketone)	0.16	0.92	0.47	2.7
Cyclohexane	0.16	0.76	0.55	2.6
Benzene	0.16	0.69	0.51	2.2
Heptane	0.16	0.76	0.66	3.1
Toluene	0.16	0.92	0.61	3.5
Tetrachloroethene	0.16	11	1.1	74
m,p-Xylene	0.16	0.19	0.70	0.83

Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: 094AG124CS

Lab ID#: 0906342A-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	4.2	0.78	20
Chloromethane	0.16	2.6	0.33	5.4
1,3-Butadiene	0.16	1.8	0.35	4.0
Chloroethane	0.16	0.16	0.42	0.42
Freon 11	0.16	0.31	0.89	1.8
Ethanol	0.79	720 E	1.5	1300 E
Acetone	0.79	44	1.9	100
2-Propanol	0.79	33	1.9	80
Hexane	0.16	0.17	0.56	0.60
2-Butanone (Methyl Ethyl Ketone)	0.16	1.2	0.46	3.6
Benzene	0.16	2.5	0.50	8.1
Heptane	0.16	0.16	0.65	0.65
Toluene	0.16	2.5	0.60	9.4
Ethyl Benzene	0.16	0.21	0.69	0.89
m,p-Xylene	0.16	0.55	0.69	2.4
Styrene	0.16	0.24	0.67	1.0

Client Sample ID: 094AG125IA

Lab ID#: 0906342A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.20	0.67	0.97	3.3
Chloromethane	0.20	0.53	0.40	1.1
Freon 11	0.20	0.27	1.1	1.5
Ethanol	0.98	210 E	1.8	400 E
Acetone	0.98	280 E	2.3	650 E
2-Propanol	0.98	4.6	2.4	11
Hexane	0.20	0.41	0.69	1.4
2-Butanone (Methyl Ethyl Ketone)	0.20	5.7	0.58	17
Cyclohexane	0.20	0.32	0.67	1.1
Benzene	0.20	0.72	0.63	2.3
Heptane	0.20	1.3	0.80	5.4
Toluene	0.20	5.0	0.74	19
Tetrachloroethene	0.20	2.2	1.3	15
Ethyl Benzene	0.20	0.33	0.85	1.4
m,p-Xylene	0.20	1.2	0.85	5.3

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: 094AG125IA

Lab ID#: 0906342A-05A

o-Xylene	0.20	0.38	0.85	1.6
1,4-Dichlorobenzene	0.20	26	1.2	160

Client Sample ID: 094AG126IA

Lab ID#: 0906342A-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.51	0.81	2.5
Chloromethane	0.16	0.43	0.34	0.90
Freon 11	0.16	0.28	0.92	1.5
Ethanol	0.82	320 E	1.5	610 E
Acetone	0.82	8.8	1.9	21
2-Propanol	0.82	1.1	2.0	2.7
Hexane	0.16	0.61	0.58	2.1
2-Butanone (Methyl Ethyl Ketone)	0.16	0.34	0.48	0.99
Cyclohexane	0.16	0.36	0.56	1.2
Benzene	0.16	1.5	0.52	4.7
Heptane	0.16	0.50	0.67	2.0
Toluene	0.16	5.3	0.62	20
Tetrachloroethene	0.16	0.34	1.1	2.3
Ethyl Benzene	0.16	0.87	0.71	3.8
m,p-Xylene	0.16	3.1	0.71	13
o-Xylene	0.16	1.0	0.71	4.5
4-Ethyltoluene	0.16	0.48	0.81	2.3
1,2,4-Trimethylbenzene	0.16	0.48	0.81	2.4
1,4-Dichlorobenzene	0.16	1.4	0.99	8.5

Client Sample ID: 094AG127IA

Lab ID#: 0906342A-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.50	0.81	2.5
Chloromethane	0.16	0.57	0.34	1.2
Freon 11	0.16	0.22	0.92	1.2
Ethanol	0.82	310 E	1.5	590 E
Acetone	0.82	18	1.9	43
2-Propanol	0.82	1.3	2.0	3.2
Hexane	0.16	0.61	0.58	2.2

Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: 094AG1271A

Lab ID#: 0906342A-07A

2-Butanone (Methyl Ethyl Ketone)	0.16	1.1	0.48	3.3
Cyclohexane	0.16	0.35	0.56	1.2
Benzene	0.16	1.5	0.52	4.8
Heptane	0.16	0.48	0.67	2.0
Toluene	0.16	5.4	0.62	20
Tetrachloroethene	0.16	0.31	1.1	2.1
Ethyl Benzene	0.16	0.81	0.71	3.5
m,p-Xylene	0.16	3.1	0.71	14
o-Xylene	0.16	0.99	0.71	4.3
4-Ethyltoluene	0.16	0.45	0.81	2.2
1,3,5-Trimethylbenzene	0.16	0.16	0.81	0.81
1,2,4-Trimethylbenzene	0.16	0.43	0.81	2.1
1,4-Dichlorobenzene	0.16	1.4	0.99	8.2

Client Sample ID: 094AG133TB

Lab ID#: 0906342A-13A

No Detections Were Found.

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG121AA

Lab ID#: 0906342A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z062211**	**Date of Collection: 6/12/09 1:05:00 PM**	
Dil. Factor:	**7.31**	**Date of Analysis: 6/22/09 05:12 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.73	Not Detected	3.6	Not Detected
Freon 114	0.73	Not Detected	5.1	Not Detected
Chloromethane	0.73	Not Detected	1.5	Not Detected
Vinyl Chloride	0.73	Not Detected	1.9	Not Detected
1,3-Butadiene	0.73	Not Detected	1.6	Not Detected
Bromomethane	0.73	Not Detected	2.8	Not Detected
Chloroethane	0.73	Not Detected	1.9	Not Detected
Freon 11	0.73	Not Detected	4.1	Not Detected
Ethanol	3.6	Not Detected	6.9	Not Detected
Freon 113	0.73	Not Detected	5.6	Not Detected
1,1-Dichloroethene	0.73	Not Detected	2.9	Not Detected
Acetone	3.6	5.7	8.7	14
2-Propanol	3.6	Not Detected	9.0	Not Detected
Carbon Disulfide	3.6	Not Detected	11	Not Detected
3-Chloropropene	3.6	Not Detected	11	Not Detected
Methylene Chloride	1.5	Not Detected	5.1	Not Detected
Methyl tert-butyl ether	0.73	Not Detected	2.6	Not Detected
trans-1,2-Dichloroethene	0.73	Not Detected	2.9	Not Detected
Hexane	0.73	Not Detected	2.6	Not Detected
1,1-Dichloroethane	0.73	Not Detected	3.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.73	0.76	2.2	2.2
cis-1,2-Dichloroethene	0.73	Not Detected	2.9	Not Detected
Tetrahydrofuran	3.6	Not Detected	11	Not Detected
Chloroform	0.73	Not Detected	3.6	Not Detected
1,1,1-Trichloroethane	0.73	Not Detected	4.0	Not Detected
Cyclohexane	0.73	Not Detected	2.5	Not Detected
Carbon Tetrachloride	0.73	Not Detected	4.6	Not Detected
2,2,4-Trimethylpentane	3.6	Not Detected	17	Not Detected
Benzene	0.73	0.86	2.3	2.7
1,2-Dichloroethane	0.73	Not Detected	3.0	Not Detected
Heptane	0.73	Not Detected	3.0	Not Detected
Trichloroethene	0.73	Not Detected	3.9	Not Detected
1,2-Dichloropropane	0.73	Not Detected	3.4	Not Detected
1,4-Dioxane	0.73	Not Detected	2.6	Not Detected
Bromodichloromethane	0.73	Not Detected	4.9	Not Detected
cis-1,3-Dichloropropene	0.73	Not Detected	3.3	Not Detected
4-Methyl-2-pentanone	0.73	Not Detected	3.0	Not Detected
Toluene	0.73	1.0	2.8	3.9
trans-1,3-Dichloropropene	0.73	Not Detected	3.3	Not Detected

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG121AA

Lab ID#: 0906342A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z062211**	**Date of Collection: 6/12/09 1:05:00 PM**	
Dil. Factor:	**7.31**	**Date of Analysis: 6/22/09 05:12 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	0.73	Not Detected	4.0	Not Detected
Tetrachloroethene	0.73	Not Detected	5.0	Not Detected
2-Hexanone	3.6	Not Detected	15	Not Detected
Dibromochloromethane	0.73	Not Detected	6.2	Not Detected
1,2-Dibromoethane (EDB)	0.73	Not Detected	5.6	Not Detected
Chlorobenzene	0.73	Not Detected	3.4	Not Detected
Ethyl Benzene	0.73	Not Detected	3.2	Not Detected
m,p-Xylene	0.73	Not Detected	3.2	Not Detected
o-Xylene	0.73	Not Detected	3.2	Not Detected
Styrene	0.73	Not Detected	3.1	Not Detected
Bromoform	0.73	Not Detected	7.6	Not Detected
Cumene	0.73	Not Detected	3.6	Not Detected
1,1,2,2-Tetrachloroethane	0.73	Not Detected	5.0	Not Detected
Propylbenzene	0.73	Not Detected	3.6	Not Detected
4-Ethyltoluene	0.73	Not Detected	3.6	Not Detected
1,3,5-Trimethylbenzene	0.73	Not Detected	3.6	Not Detected
1,2,4-Trimethylbenzene	0.73	Not Detected	3.6	Not Detected
1,3-Dichlorobenzene	0.73	Not Detected	4.4	Not Detected
1,4-Dichlorobenzene	0.73	Not Detected	4.4	Not Detected
alpha-Chlorotoluene	0.73	Not Detected	3.8	Not Detected
1,2-Dichlorobenzene	0.73	Not Detected	4.4	Not Detected
1,2,4-Trichlorobenzene	3.6	Not Detected	27	Not Detected
Hexachlorobutadiene	3.6	Not Detected	39	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	91	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG122AA

Lab ID#: 0906342A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z062212**	**Date of Collection: 6/12/09 1:10:00 PM**	
Dil. Factor:	**6.70**	**Date of Analysis: 6/22/09 06:03 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.67	Not Detected	3.3	Not Detected
Freon 114	0.67	Not Detected	4.7	Not Detected
Chloromethane	0.67	Not Detected	1.4	Not Detected
Vinyl Chloride	0.67	Not Detected	1.7	Not Detected
1,3-Butadiene	0.67	Not Detected	1.5	Not Detected
Bromomethane	0.67	Not Detected	2.6	Not Detected
Chloroethane	0.67	Not Detected	1.8	Not Detected
Freon 11	0.67	Not Detected	3.8	Not Detected
Ethanol	3.4	Not Detected	6.3	Not Detected
Freon 113	0.67	Not Detected	5.1	Not Detected
1,1-Dichloroethene	0.67	Not Detected	2.6	Not Detected
Acetone	3.4	18	8.0	43
2-Propanol	3.4	Not Detected	8.2	Not Detected
Carbon Disulfide	3.4	Not Detected	10	Not Detected
3-Chloropropene	3.4	Not Detected	10	Not Detected
Methylene Chloride	1.3	Not Detected	4.6	Not Detected
Methyl tert-butyl ether	0.67	Not Detected	2.4	Not Detected
trans-1,2-Dichloroethene	0.67	Not Detected	2.6	Not Detected
Hexane	0.67	Not Detected	2.4	Not Detected
1,1-Dichloroethane	0.67	Not Detected	2.7	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.67	1.4	2.0	4.1
cis-1,2-Dichloroethene	0.67	Not Detected	2.6	Not Detected
Tetrahydrofuran	3.4	Not Detected	9.9	Not Detected
Chloroform	0.67	Not Detected	3.3	Not Detected
1,1,1-Trichloroethane	0.67	Not Detected	3.6	Not Detected
Cyclohexane	0.67	Not Detected	2.3	Not Detected
Carbon Tetrachloride	0.67	Not Detected	4.2	Not Detected
2,2,4-Trimethylpentane	3.4	Not Detected	16	Not Detected
Benzene	0.67	0.94	2.1	3.0
1,2-Dichloroethane	0.67	Not Detected	2.7	Not Detected
Heptane	0.67	Not Detected	2.7	Not Detected
Trichloroethene	0.67	Not Detected	3.6	Not Detected
1,2-Dichloropropane	0.67	Not Detected	3.1	Not Detected
1,4-Dioxane	0.67	Not Detected	2.4	Not Detected
Bromodichloromethane	0.67	Not Detected	4.5	Not Detected
cis-1,3-Dichloropropene	0.67	Not Detected	3.0	Not Detected
4-Methyl-2-pentanone	0.67	Not Detected	2.7	Not Detected
Toluene	0.67	1.2	2.5	4.7
trans-1,3-Dichloropropene	0.67	Not Detected	3.0	Not Detected

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG122AA

Lab ID#: 0906342A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z062212**	**Date of Collection: 6/12/09 1:10:00 PM**	
Dil. Factor:	**6.70**	**Date of Analysis: 6/22/09 06:03 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	0.67	Not Detected	3.6	Not Detected
Tetrachloroethene	0.67	Not Detected	4.5	Not Detected
2-Hexanone	3.4	Not Detected	14	Not Detected
Dibromochloromethane	0.67	Not Detected	5.7	Not Detected
1,2-Dibromoethane (EDB)	0.67	Not Detected	5.1	Not Detected
Chlorobenzene	0.67	Not Detected	3.1	Not Detected
Ethyl Benzene	0.67	Not Detected	2.9	Not Detected
m,p-Xylene	0.67	Not Detected	2.9	Not Detected
o-Xylene	0.67	Not Detected	2.9	Not Detected
Styrene	0.67	Not Detected	2.8	Not Detected
Bromoform	0.67	Not Detected	6.9	Not Detected
Cumene	0.67	Not Detected	3.3	Not Detected
1,1,2,2-Tetrachloroethane	0.67	Not Detected	4.6	Not Detected
Propylbenzene	0.67	Not Detected	3.3	Not Detected
4-Ethyltoluene	0.67	Not Detected	3.3	Not Detected
1,3,5-Trimethylbenzene	0.67	Not Detected	3.3	Not Detected
1,2,4-Trimethylbenzene	0.67	Not Detected	3.3	Not Detected
1,3-Dichlorobenzene	0.67	Not Detected	4.0	Not Detected
1,4-Dichlorobenzene	0.67	Not Detected	4.0	Not Detected
alpha-Chlorotoluene	0.67	Not Detected	3.5	Not Detected
1,2-Dichlorobenzene	0.67	Not Detected	4.0	Not Detected
1,2,4-Trichlorobenzene	3.4	Not Detected	25	Not Detected
Hexachlorobutadiene	3.4	Not Detected	36	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	94	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG123CS

Lab ID#: 0906342A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z062213**	**Date of Collection:**	**6/12/09 1:15:00 PM**
Dil. Factor:	**1.61**	**Date of Analysis:**	**6/22/09 06:47 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.76	0.80	3.8
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.16	0.49	0.33	1.0
Vinyl Chloride	0.16	Not Detected	0.41	Not Detected
1,3-Butadiene	0.16	0.81	0.36	1.8
Bromomethane	0.16	Not Detected	0.62	Not Detected
Chloroethane	0.16	Not Detected	0.42	Not Detected
Freon 11	0.16	0.28	0.90	1.6
Ethanol	0.80	130 E	1.5	240 E
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Acetone	0.80	14	1.9	32
2-Propanol	0.80	1.2	2.0	3.0
Carbon Disulfide	0.80	Not Detected	2.5	Not Detected
3-Chloropropene	0.80	Not Detected	2.5	Not Detected
Methylene Chloride	0.32	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.58	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Hexane	0.16	0.33	0.57	1.2
1,1-Dichloroethane	0.16	Not Detected	0.65	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.16	0.92	0.47	2.7
cis-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Tetrahydrofuran	0.80	Not Detected	2.4	Not Detected
Chloroform	0.16	Not Detected	0.79	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.88	Not Detected
Cyclohexane	0.16	0.76	0.55	2.6
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.80	Not Detected	3.8	Not Detected
Benzene	0.16	0.69	0.51	2.2
1,2-Dichloroethane	0.16	Not Detected	0.65	Not Detected
Heptane	0.16	0.76	0.66	3.1
Trichloroethene	0.16	Not Detected	0.86	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.74	Not Detected
1,4-Dioxane	0.16	Not Detected	0.58	Not Detected
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.73	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.66	Not Detected
Toluene	0.16	0.92	0.61	3.5
trans-1,3-Dichloropropene	0.16	Not Detected	0.73	Not Detected

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG123CS

Lab ID#: 0906342A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z062213**	**Date of Collection: 6/12/09 1:15:00 PM**	
Dil. Factor:	**1.61**	**Date of Analysis: 6/22/09 06:47 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	0.16	Not Detected	0.88	Not Detected
Tetrachloroethene	0.16	11	1.1	74
2-Hexanone	0.80	Not Detected	3.3	Not Detected
Dibromochloromethane	0.16	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.74	Not Detected
Ethyl Benzene	0.16	Not Detected	0.70	Not Detected
m,p-Xylene	0.16	0.19	0.70	0.83
o-Xylene	0.16	Not Detected	0.70	Not Detected
Styrene	0.16	Not Detected	0.68	Not Detected
Bromoform	0.16	Not Detected	1.7	Not Detected
Cumene	0.16	Not Detected	0.79	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.79	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.79	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.79	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.79	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.83	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected	6.0	Not Detected
Hexachlorobutadiene	0.80	Not Detected	8.6	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	90	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG124CS

Lab ID#: 0906342A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z062214**	**Date of Collection: 6/12/09 1:15:00 PM**	
Dil. Factor:	**1.58**	**Date of Analysis: 6/22/09 07:29 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	4.2	0.78	20
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.16	2.6	0.33	5.4
Vinyl Chloride	0.16	Not Detected	0.40	Not Detected
1,3-Butadiene	0.16	1.8	0.35	4.0
Bromomethane	0.16	Not Detected	0.61	Not Detected
Chloroethane	0.16	0.16	0.42	0.42
Freon 11	0.16	0.31	0.89	1.8
Ethanol	0.79	720 E	1.5	1300 E
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Acetone	0.79	44	1.9	100
2-Propanol	0.79	33	1.9	80
Carbon Disulfide	0.79	Not Detected	2.5	Not Detected
3-Chloropropene	0.79	Not Detected	2.5	Not Detected
Methylene Chloride	0.32	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.57	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Hexane	0.16	0.17	0.56	0.60
1,1-Dichloroethane	0.16	Not Detected	0.64	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.16	1.2	0.46	3.6
cis-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Tetrahydrofuran	0.79	Not Detected	2.3	Not Detected
Chloroform	0.16	Not Detected	0.77	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.86	Not Detected
Cyclohexane	0.16	Not Detected	0.54	Not Detected
Carbon Tetrachloride	0.16	Not Detected	0.99	Not Detected
2,2,4-Trimethylpentane	0.79	Not Detected	3.7	Not Detected
Benzene	0.16	2.5	0.50	8.1
1,2-Dichloroethane	0.16	Not Detected	0.64	Not Detected
Heptane	0.16	0.16	0.65	0.65
Trichloroethene	0.16	Not Detected	0.85	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.73	Not Detected
1,4-Dioxane	0.16	Not Detected	0.57	Not Detected
Bromodichloromethane	0.16	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.72	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.65	Not Detected
Toluene	0.16	2.5	0.60	9.4
trans-1,3-Dichloropropene	0.16	Not Detected	0.72	Not Detected

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG124CS

Lab ID#: 0906342A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z062214**	**Date of Collection: 6/12/09 1:15:00 PM**	
Dil. Factor:	**1.58**	**Date of Analysis: 6/22/09 07:29 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	0.16	Not Detected	0.86	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.79	Not Detected	3.2	Not Detected
Dibromochloromethane	0.16	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.73	Not Detected
Ethyl Benzene	0.16	0.21	0.69	0.89
m,p-Xylene	0.16	0.55	0.69	2.4
o-Xylene	0.16	Not Detected	0.69	Not Detected
Styrene	0.16	0.24	0.67	1.0
Bromoform	0.16	Not Detected	1.6	Not Detected
Cumene	0.16	Not Detected	0.78	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.78	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.78	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.78	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.78	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.82	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
1,2,4-Trichlorobenzene	0.79	Not Detected	5.9	Not Detected
Hexachlorobutadiene	0.79	Not Detected	8.4	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	87	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG1251A

Lab ID#: 0906342A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z062215**	**Date of Collection:**	**6/12/09 1:20:00 PM**
Dil. Factor:	**1.96**	**Date of Analysis:**	**6/22/09 08:04 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.20	0.67	0.97	3.3
Freon 114	0.20	Not Detected	1.4	Not Detected
Chloromethane	0.20	0.53	0.40	1.1
Vinyl Chloride	0.20	Not Detected	0.50	Not Detected
1,3-Butadiene	0.20	Not Detected	0.43	Not Detected
Bromomethane	0.20	Not Detected	0.76	Not Detected
Chloroethane	0.20	Not Detected	0.52	Not Detected
Freon 11	0.20	0.27	1.1	1.5
Ethanol	0.98	210 E	1.8	400 E
Freon 113	0.20	Not Detected	1.5	Not Detected
1,1-Dichloroethene	0.20	Not Detected	0.78	Not Detected
Acetone	0.98	280 E	2.3	650 E
2-Propanol	0.98	4.6	2.4	11
Carbon Disulfide	0.98	Not Detected	3.0	Not Detected
3-Chloropropene	0.98	Not Detected	3.1	Not Detected
Methylene Chloride	0.39	Not Detected	1.4	Not Detected
Methyl tert-butyl ether	0.20	Not Detected	0.71	Not Detected
trans-1,2-Dichloroethene	0.20	Not Detected	0.78	Not Detected
Hexane	0.20	0.41	0.69	1.4
1,1-Dichloroethane	0.20	Not Detected	0.79	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.20	5.7	0.58	17
cis-1,2-Dichloroethene	0.20	Not Detected	0.78	Not Detected
Tetrahydrofuran	0.98	Not Detected	2.9	Not Detected
Chloroform	0.20	Not Detected	0.96	Not Detected
1,1,1-Trichloroethane	0.20	Not Detected	1.1	Not Detected
Cyclohexane	0.20	0.32	0.67	1.1
Carbon Tetrachloride	0.20	Not Detected	1.2	Not Detected
2,2,4-Trimethylpentane	0.98	Not Detected	4.6	Not Detected
Benzene	0.20	0.72	0.63	2.3
1,2-Dichloroethane	0.20	Not Detected	0.79	Not Detected
Heptane	0.20	1.3	0.80	5.4
Trichloroethene	0.20	Not Detected	1.0	Not Detected
1,2-Dichloropropane	0.20	Not Detected	0.90	Not Detected
1,4-Dioxane	0.20	Not Detected	0.71	Not Detected
Bromodichloromethane	0.20	Not Detected	1.3	Not Detected
cis-1,3-Dichloropropene	0.20	Not Detected	0.89	Not Detected
4-Methyl-2-pentanone	0.20	Not Detected	0.80	Not Detected
Toluene	0.20	5.0	0.74	19
trans-1,3-Dichloropropene	0.20	Not Detected	0.89	Not Detected

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG125IA

Lab ID#: 0906342A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z062215**	**Date of Collection: 6/12/09 1:20:00 PM**	
Dil. Factor:	**1.96**	**Date of Analysis: 6/22/09 08:04 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	0.20	Not Detected	1.1	Not Detected
Tetrachloroethene	0.20	2.2	1.3	15
2-Hexanone	0.98	Not Detected	4.0	Not Detected
Dibromochloromethane	0.20	Not Detected	1.7	Not Detected
1,2-Dibromoethane (EDB)	0.20	Not Detected	1.5	Not Detected
Chlorobenzene	0.20	Not Detected	0.90	Not Detected
Ethyl Benzene	0.20	0.33	0.85	1.4
m,p-Xylene	0.20	1.2	0.85	5.3
o-Xylene	0.20	0.38	0.85	1.6
Styrene	0.20	Not Detected	0.83	Not Detected
Bromoform	0.20	Not Detected	2.0	Not Detected
Cumene	0.20	Not Detected	0.96	Not Detected
1,1,2,2-Tetrachloroethane	0.20	Not Detected	1.3	Not Detected
Propylbenzene	0.20	Not Detected	0.96	Not Detected
4-Ethyltoluene	0.20	Not Detected	0.96	Not Detected
1,3,5-Trimethylbenzene	0.20	Not Detected	0.96	Not Detected
1,2,4-Trimethylbenzene	0.20	Not Detected	0.96	Not Detected
1,3-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
1,4-Dichlorobenzene	0.20	26	1.2	160
alpha-Chlorotoluene	0.20	Not Detected	1.0	Not Detected
1,2-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
1,2,4-Trichlorobenzene	0.98	Not Detected	7.3	Not Detected
Hexachlorobutadiene	0.98	Not Detected	10	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	88	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG126IA

Lab ID#: 0906342A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	z062216	Date of Collection:	6/12/09 1:30:00 PM
Dil. Factor:	1.64	Date of Analysis:	6/22/09 08:41 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.51	0.81	2.5
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.16	0.43	0.34	0.90
Vinyl Chloride	0.16	Not Detected	0.42	Not Detected
1,3-Butadiene	0.16	Not Detected	0.36	Not Detected
Bromomethane	0.16	Not Detected	0.64	Not Detected
Chloroethane	0.16	Not Detected	0.43	Not Detected
Freon 11	0.16	0.28	0.92	1.5
Ethanol	0.82	320 E	1.5	610 E
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	8.8	1.9	21
2-Propanol	0.82	1.1	2.0	2.7
Carbon Disulfide	0.82	Not Detected	2.6	Not Detected
3-Chloropropene	0.82	Not Detected	2.6	Not Detected
Methylene Chloride	0.33	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.59	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Hexane	0.16	0.61	0.58	2.1
1,1-Dichloroethane	0.16	Not Detected	0.66	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.16	0.34	0.48	0.99
cis-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Tetrahydrofuran	0.82	Not Detected	2.4	Not Detected
Chloroform	0.16	Not Detected	0.80	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Cyclohexane	0.16	0.36	0.56	1.2
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.82	Not Detected	3.8	Not Detected
Benzene	0.16	1.5	0.52	4.7
1,2-Dichloroethane	0.16	Not Detected	0.66	Not Detected
Heptane	0.16	0.50	0.67	2.0
Trichloroethene	0.16	Not Detected	0.88	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.76	Not Detected
1,4-Dioxane	0.16	Not Detected	0.59	Not Detected
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.67	Not Detected
Toluene	0.16	5.3	0.62	20
trans-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG126IA

Lab ID#: 0906342A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z062216**	**Date of Collection: 6/12/09 1:30:00 PM**	
Dil. Factor:	**1.64**	**Date of Analysis: 6/22/09 08:41 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Tetrachloroethene	0.16	0.34	1.1	2.3
2-Hexanone	0.82	Not Detected	3.4	Not Detected
Dibromochloromethane	0.16	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.3	Not Detected
Chlorobenzene	0.16	Not Detected	0.76	Not Detected
Ethyl Benzene	0.16	0.87	0.71	3.8
m,p-Xylene	0.16	3.1	0.71	13
o-Xylene	0.16	1.0	0.71	4.5
Styrene	0.16	Not Detected	0.70	Not Detected
Bromoform	0.16	Not Detected	1.7	Not Detected
Cumene	0.16	Not Detected	0.81	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.81	Not Detected
4-Ethyltoluene	0.16	0.48	0.81	2.3
1,3,5-Trimethylbenzene	0.16	Not Detected	0.81	Not Detected
1,2,4-Trimethylbenzene	0.16	0.48	0.81	2.4
1,3-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,4-Dichlorobenzene	0.16	1.4	0.99	8.5
alpha-Chlorotoluene	0.16	Not Detected	0.85	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,2,4-Trichlorobenzene	0.82	Not Detected	6.1	Not Detected
Hexachlorobutadiene	0.82	Not Detected	8.7	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	90	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG1271A

Lab ID#: 0906342A-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z062217**	**Date of Collection: 6/12/09 2:00:00 PM**	
Dil. Factor:	**1.64**	**Date of Analysis: 6/22/09 09:32 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.50	0.81	2.5
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.16	0.57	0.34	1.2
Vinyl Chloride	0.16	Not Detected	0.42	Not Detected
1,3-Butadiene	0.16	Not Detected	0.36	Not Detected
Bromomethane	0.16	Not Detected	0.64	Not Detected
Chloroethane	0.16	Not Detected	0.43	Not Detected
Freon 11	0.16	0.22	0.92	1.2
Ethanol	0.82	310 E	1.5	590 E
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	18	1.9	43
2-Propanol	0.82	1.3	2.0	3.2
Carbon Disulfide	0.82	Not Detected	2.6	Not Detected
3-Chloropropene	0.82	Not Detected	2.6	Not Detected
Methylene Chloride	0.33	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.59	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Hexane	0.16	0.61	0.58	2.2
1,1-Dichloroethane	0.16	Not Detected	0.66	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.16	1.1	0.48	3.3
cis-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Tetrahydrofuran	0.82	Not Detected	2.4	Not Detected
Chloroform	0.16	Not Detected	0.80	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Cyclohexane	0.16	0.35	0.56	1.2
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.82	Not Detected	3.8	Not Detected
Benzene	0.16	1.5	0.52	4.8
1,2-Dichloroethane	0.16	Not Detected	0.66	Not Detected
Heptane	0.16	0.48	0.67	2.0
Trichloroethene	0.16	Not Detected	0.88	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.76	Not Detected
1,4-Dioxane	0.16	Not Detected	0.59	Not Detected
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.67	Not Detected
Toluene	0.16	5.4	0.62	20
trans-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG1271A

Lab ID#: 0906342A-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z062217**	**Date of Collection: 6/12/09 2:00:00 PM**	
Dil. Factor:	**1.64**	**Date of Analysis: 6/22/09 09:32 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Tetrachloroethene	0.16	0.31	1.1	2.1
2-Hexanone	0.82	Not Detected	3.4	Not Detected
Dibromochloromethane	0.16	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.3	Not Detected
Chlorobenzene	0.16	Not Detected	0.76	Not Detected
Ethyl Benzene	0.16	0.81	0.71	3.5
m,p-Xylene	0.16	3.1	0.71	14
o-Xylene	0.16	0.99	0.71	4.3
Styrene	0.16	Not Detected	0.70	Not Detected
Bromoform	0.16	Not Detected	1.7	Not Detected
Cumene	0.16	Not Detected	0.81	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.81	Not Detected
4-Ethyltoluene	0.16	0.45	0.81	2.2
1,3,5-Trimethylbenzene	0.16	0.16	0.81	0.81
1,2,4-Trimethylbenzene	0.16	0.43	0.81	2.1
1,3-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,4-Dichlorobenzene	0.16	1.4	0.99	8.2
alpha-Chlorotoluene	0.16	Not Detected	0.85	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,2,4-Trichlorobenzene	0.82	Not Detected	6.1	Not Detected
Hexachlorobutadiene	0.82	Not Detected	8.7	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	91	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG133TB

Lab ID#: 0906342A-13A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z062218**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/22/09 10:08 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.10	Not Detected	0.49	Not Detected
Freon 114	0.10	Not Detected	0.70	Not Detected
Chloromethane	0.10	Not Detected	0.21	Not Detected
Vinyl Chloride	0.10	Not Detected	0.26	Not Detected
1,3-Butadiene	0.10	Not Detected	0.22	Not Detected
Bromomethane	0.10	Not Detected	0.39	Not Detected
Chloroethane	0.10	Not Detected	0.26	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Ethanol	0.50	Not Detected	0.94	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Acetone	0.50	Not Detected	1.2	Not Detected
2-Propanol	0.50	Not Detected	1.2	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	0.50	Not Detected	1.6	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Hexane	0.10	Not Detected	0.35	Not Detected
1,1-Dichloroethane	0.10	Not Detected	0.40	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.10	Not Detected	0.29	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.10	Not Detected	0.49	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Cyclohexane	0.10	Not Detected	0.34	Not Detected
Carbon Tetrachloride	0.10	Not Detected	0.63	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.10	Not Detected	0.32	Not Detected
1,2-Dichloroethane	0.10	Not Detected	0.40	Not Detected
Heptane	0.10	Not Detected	0.41	Not Detected
Trichloroethene	0.10	Not Detected	0.54	Not Detected
1,2-Dichloropropane	0.10	Not Detected	0.46	Not Detected
1,4-Dioxane	0.10	Not Detected	0.36	Not Detected
Bromodichloromethane	0.10	Not Detected	0.67	Not Detected
cis-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
4-Methyl-2-pentanone	0.10	Not Detected	0.41	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
trans-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG133TB

Lab ID#: 0906342A-13A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z062218**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/22/09 10:08 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected
2-Hexanone	0.50	Not Detected	2.0	Not Detected
Dibromochloromethane	0.10	Not Detected	0.85	Not Detected
1,2-Dibromoethane (EDB)	0.10	Not Detected	0.77	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
Styrene	0.10	Not Detected	0.42	Not Detected
Bromoform	0.10	Not Detected	1.0	Not Detected
Cumene	0.10	Not Detected	0.49	Not Detected
1,1,2,2-Tetrachloroethane	0.10	Not Detected	0.69	Not Detected
Propylbenzene	0.10	Not Detected	0.49	Not Detected
4-Ethyltoluene	0.10	Not Detected	0.49	Not Detected
1,3,5-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,2,4-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
alpha-Chlorotoluene	0.10	Not Detected	0.52	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected
Hexachlorobutadiene	0.50	Not Detected	5.3	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	84	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 0906342A-14A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z062209**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/22/09 03:26 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.10	Not Detected	0.49	Not Detected
Freon 114	0.10	Not Detected	0.70	Not Detected
Chloromethane	0.10	Not Detected	0.21	Not Detected
Vinyl Chloride	0.10	Not Detected	0.26	Not Detected
1,3-Butadiene	0.10	Not Detected	0.22	Not Detected
Bromomethane	0.10	Not Detected	0.39	Not Detected
Chloroethane	0.10	Not Detected	0.26	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Ethanol	0.50	Not Detected	0.94	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Acetone	0.50	Not Detected	1.2	Not Detected
2-Propanol	0.50	Not Detected	1.2	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	0.50	Not Detected	1.6	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Hexane	0.10	Not Detected	0.35	Not Detected
1,1-Dichloroethane	0.10	Not Detected	0.40	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.10	Not Detected	0.29	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.10	Not Detected	0.49	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Cyclohexane	0.10	Not Detected	0.34	Not Detected
Carbon Tetrachloride	0.10	Not Detected	0.63	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.10	Not Detected	0.32	Not Detected
1,2-Dichloroethane	0.10	Not Detected	0.40	Not Detected
Heptane	0.10	Not Detected	0.41	Not Detected
Trichloroethene	0.10	Not Detected	0.54	Not Detected
1,2-Dichloropropane	0.10	Not Detected	0.46	Not Detected
1,4-Dioxane	0.10	Not Detected	0.36	Not Detected
Bromodichloromethane	0.10	Not Detected	0.67	Not Detected
cis-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
4-Methyl-2-pentanone	0.10	Not Detected	0.41	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
trans-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 0906342A-14A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z062209**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/22/09 03:26 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected
2-Hexanone	0.50	Not Detected	2.0	Not Detected
Dibromochloromethane	0.10	Not Detected	0.85	Not Detected
1,2-Dibromoethane (EDB)	0.10	Not Detected	0.77	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
Styrene	0.10	Not Detected	0.42	Not Detected
Bromoform	0.10	Not Detected	1.0	Not Detected
Cumene	0.10	Not Detected	0.49	Not Detected
1,1,2,2-Tetrachloroethane	0.10	Not Detected	0.69	Not Detected
Propylbenzene	0.10	Not Detected	0.49	Not Detected
4-Ethyltoluene	0.10	Not Detected	0.49	Not Detected
1,3,5-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,2,4-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
alpha-Chlorotoluene	0.10	Not Detected	0.52	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected
Hexachlorobutadiene	0.50	Not Detected	5.3	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	96	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: CCV

Lab ID#: 0906342A-15A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z062203**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/22/09 09:44 AM**	

Compound	%Recovery
Freon 12	106
Freon 114	94
Chloromethane	102
Vinyl Chloride	98
1,3-Butadiene	95
Bromomethane	99
Chloroethane	94
Freon 11	110
Ethanol	80
Freon 113	90
1,1-Dichloroethene	92
Acetone	82
2-Propanol	83
Carbon Disulfide	91
3-Chloropropene	83
Methylene Chloride	93
Methyl tert-butyl ether	106
trans-1,2-Dichloroethene	95
Hexane	97
1,1-Dichloroethane	98
2-Butanone (Methyl Ethyl Ketone)	106
cis-1,2-Dichloroethene	98
Tetrahydrofuran	93
Chloroform	99
1,1,1-Trichloroethane	101
Cyclohexane	98
Carbon Tetrachloride	104
2,2,4-Trimethylpentane	95
Benzene	94
1,2-Dichloroethane	104
Heptane	101
Trichloroethene	98
1,2-Dichloropropane	98
1,4-Dioxane	102
Bromodichloromethane	109
cis-1,3-Dichloropropene	104
4-Methyl-2-pentanone	102
Toluene	100
trans-1,3-Dichloropropene	94

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: CCV

Lab ID#: 0906342A-15A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z062203**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/22/09 09:44 AM**	

Compound	%Recovery
1,1,2-Trichloroethane	101
Tetrachloroethene	100
2-Hexanone	94
Dibromochloromethane	111
1,2-Dibromoethane (EDB)	105
Chlorobenzene	101
Ethyl Benzene	109
m,p-Xylene	110
o-Xylene	110
Styrene	109
Bromoform	110
Cumene	115
1,1,2,2-Tetrachloroethane	106
Propylbenzene	113
4-Ethyltoluene	114
1,3,5-Trimethylbenzene	109
1,2,4-Trimethylbenzene	111
1,3-Dichlorobenzene	103
1,4-Dichlorobenzene	105
alpha-Chlorotoluene	108
1,2-Dichlorobenzene	104
1,2,4-Trichlorobenzene	95
Hexachlorobutadiene	94

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 0906342A-16A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z062206**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/22/09 12:48 PM**	

Compound	%Recovery
Freon 12	110
Freon 114	104
Chloromethane	110
Vinyl Chloride	107
1,3-Butadiene	105
Bromomethane	110
Chloroethane	99
Freon 11	114
Ethanol	67
Freon 113	113
1,1-Dichloroethene	121
Acetone	114
2-Propanol	104
Carbon Disulfide	102
3-Chloropropene	110
Methylene Chloride	114
Methyl tert-butyl ether	134
trans-1,2-Dichloroethene	105
Hexane	114
1,1-Dichloroethane	110
2-Butanone (Methyl Ethyl Ketone)	91
cis-1,2-Dichloroethene	107
Tetrahydrofuran	105
Chloroform	107
1,1,1-Trichloroethane	111
Cyclohexane	117
Carbon Tetrachloride	121
2,2,4-Trimethylpentane	108
Benzene	102
1,2-Dichloroethane	110
Heptane	111
Trichloroethene	104
1,2-Dichloropropane	106
1,4-Dioxane	106
Bromodichloromethane	116
cis-1,3-Dichloropropene	113
4-Methyl-2-pentanone	113
Toluene	113
trans-1,3-Dichloropropene	108

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 0906342A-16A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z062206**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/22/09 12:48 PM**	

Compound	%Recovery
1,1,2-Trichloroethane	110
Tetrachloroethene	112
2-Hexanone	112
Dibromochloromethane	121
1,2-Dibromoethane (EDB)	114
Chlorobenzene	112
Ethyl Benzene	116
m,p-Xylene	119
o-Xylene	120
Styrene	120
Bromoform	119
Cumene	126
1,1,2,2-Tetrachloroethane	111
Propylbenzene	124
4-Ethyltoluene	122
1,3,5-Trimethylbenzene	115
1,2,4-Trimethylbenzene	117
1,3-Dichlorobenzene	109
1,4-Dichlorobenzene	108
alpha-Chlorotoluene	129
1,2-Dichlorobenzene	110
1,2,4-Trichlorobenzene	97
Hexachlorobutadiene	87

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

Air Toxics LTD.
Laboratory Services Since 1989

6/25/2009

Mr. Ben Martich
Oasis Environmental, Inc.
825 W. 8th Avenue
Suite 200
Anchorage AK 99501

Project Name: 4th + Gambell
Project #: 14-139
Workorder #: 0906342B

Dear Mr. Ben Martich

The following report includes the data for the above referenced project for sample(s) received on 6/16/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for you air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kelly Buettner
Project Manager

Air Toxics LTD.
Laboratory Services Since 1989

WORK ORDER #: 0906342B

Work Order Summary

CLIENT:	Mr. Ben Martich Oasis Environmental, Inc. 825 W. 8th Avenue Suite 200 Anchorage, AK 99501	**BILL TO:**	Mr. Ben Martich Oasis Environmental, Inc. 825 W. 8th Avenue Suite 200 Anchorage, AK 99501
PHONE:	907-258-4880	**P.O. #**	
FAX:		**PROJECT #**	14-139 4th + Gambell
DATE RECEIVED:	06/16/2009	**CONTACT:**	Kelly Buettner
DATE COMPLETED:	06/25/2009		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
08A	094AG128SG	Modified TO-15	6.0 "Hg	15 psi
09A	094AG129SG	Modified TO-15	5.5 "Hg	15 psi
10A	094AG130SG	Modified TO-15	5.5 "Hg	15 psi
11A	094AG131SG	Modified TO-15	5.0 "Hg	15 psi
12A	094AG132SG	Modified TO-15	5.0 "Hg	15 psi
13A	Lab Blank	Modified TO-15	NA	NA
14A	CCV	Modified TO-15	NA	NA
15A	LCS	Modified TO-15	NA	NA

CERTIFIED BY: _____ DATE: 06/25/09

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/08, Expiration date: 06/30/09
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
Oasis Environmental, Inc.
Workorder# 0906342B

Five 1 Liter Summa Canister samples were received on June 16, 2009. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	*TO-15*	*ATL Modifications*
Daily CCV	</= 30% Difference	</= 30% Difference; Compounds exceeding this criterion and associated data are flagged and narrated.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

The Chain of Custody (COC) information for sample 094AG130SG did not match the information on the canister with regard to canister identification. The client was notified of the discrepancy and the information on the canister was used to process and report the sample.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV
N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: 094AG128SG

Lab ID#: 0906342B-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	1.3	13	8.6	86

Client Sample ID: 094AG129SG

Lab ID#: 0906342B-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	4.9	12	12	30
2-Butanone (Methyl Ethyl Ketone)	1.2	3.4	3.6	10
Tetrachloroethene	1.2	83	8.4	560

Client Sample ID: 094AG130SG

Lab ID#: 0906342B-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	4.9	9.0	12	21
2-Butanone (Methyl Ethyl Ketone)	1.2	2.4	3.6	6.9
Tetrachloroethene	1.2	44	8.4	300

Client Sample ID: 094AG131SG

Lab ID#: 0906342B-11A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	1.2	45	8.2	300

Client Sample ID: 094AG132SG

Lab ID#: 0906342B-12A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	12	2000	82	13000

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG128SG

Lab ID#: 0906342B-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	r062420	**Date of Collection:**	6/12/09 2:00:00 PM
Dil. Factor:	2.53	**Date of Analysis:**	6/24/09 09:44 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.3	Not Detected	6.2	Not Detected
Freon 114	1.3	Not Detected	8.8	Not Detected
Chloromethane	5.1	Not Detected	10	Not Detected
Vinyl Chloride	1.3	Not Detected	3.2	Not Detected
1,3-Butadiene	1.3	Not Detected	2.8	Not Detected
Bromomethane	1.3	Not Detected	4.9	Not Detected
Chloroethane	1.3	Not Detected	3.3	Not Detected
Freon 11	1.3	Not Detected	7.1	Not Detected
Ethanol	5.1	Not Detected	9.5	Not Detected
Freon 113	1.3	Not Detected	9.7	Not Detected
1,1-Dichloroethene	1.3	Not Detected	5.0	Not Detected
Acetone	5.1	Not Detected	12	Not Detected
2-Propanol	5.1	Not Detected	12	Not Detected
Carbon Disulfide	1.3	Not Detected	3.9	Not Detected
3-Chloropropene	5.1	Not Detected	16	Not Detected
Methylene Chloride	1.3	Not Detected	4.4	Not Detected
Methyl tert-butyl ether	1.3	Not Detected	4.6	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.0	Not Detected
Hexane	1.3	Not Detected	4.4	Not Detected
1,1-Dichloroethane	1.3	Not Detected	5.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.3	Not Detected	3.7	Not Detected
cis-1,2-Dichloroethene	1.3	Not Detected	5.0	Not Detected
Tetrahydrofuran	1.3	Not Detected	3.7	Not Detected
Chloroform	1.3	Not Detected	6.2	Not Detected
1,1,1-Trichloroethane	1.3	Not Detected	6.9	Not Detected
Cyclohexane	1.3	Not Detected	4.4	Not Detected
Carbon Tetrachloride	1.3	Not Detected	8.0	Not Detected
2,2,4-Trimethylpentane	1.3	Not Detected	5.9	Not Detected
Benzene	1.3	Not Detected	4.0	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.1	Not Detected
Heptane	1.3	Not Detected	5.2	Not Detected
Trichloroethene	1.3	Not Detected	6.8	Not Detected
1,2-Dichloropropane	1.3	Not Detected	5.8	Not Detected
1,4-Dioxane	5.1	Not Detected	18	Not Detected
Bromodichloromethane	1.3	Not Detected	8.5	Not Detected
cis-1,3-Dichloropropene	1.3	Not Detected	5.7	Not Detected
4-Methyl-2-pentanone	1.3	Not Detected	5.2	Not Detected
Toluene	1.3	Not Detected	4.8	Not Detected
trans-1,3-Dichloropropene	1.3	Not Detected	5.7	Not Detected

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG128SG

Lab ID#: 0906342B-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**r062420**	**Date of Collection: 6/12/09 2:00:00 PM**	
Dil. Factor:	**2.53**	**Date of Analysis: 6/24/09 09:44 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.3	Not Detected	6.9	Not Detected
Tetrachloroethene	1.3	13	8.6	86
2-Hexanone	5.1	Not Detected	21	Not Detected
Dibromochloromethane	1.3	Not Detected	11	Not Detected
1,2-Dibromoethane (EDB)	1.3	Not Detected	9.7	Not Detected
Chlorobenzene	1.3	Not Detected	5.8	Not Detected
Ethyl Benzene	1.3	Not Detected	5.5	Not Detected
m,p-Xylene	1.3	Not Detected	5.5	Not Detected
o-Xylene	1.3	Not Detected	5.5	Not Detected
Styrene	1.3	Not Detected	5.4	Not Detected
Bromoform	1.3	Not Detected	13	Not Detected
Cumene	1.3	Not Detected	6.2	Not Detected
1,1,2,2-Tetrachloroethane	1.3	Not Detected	8.7	Not Detected
Propylbenzene	1.3	Not Detected	6.2	Not Detected
4-Ethyltoluene	1.3	Not Detected	6.2	Not Detected
1,3,5-Trimethylbenzene	1.3	Not Detected	6.2	Not Detected
1,2,4-Trimethylbenzene	1.3	Not Detected	6.2	Not Detected
1,3-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
1,4-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
alpha-Chlorotoluene	1.3	Not Detected	6.5	Not Detected
1,2-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
1,2,4-Trichlorobenzene	5.1	Not Detected	38	Not Detected
Hexachlorobutadiene	5.1	Not Detected	54	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	96	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG129SG

Lab ID#: 0906342B-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	r062421	**Date of Collection:**	6/12/09 2:40:00 PM
Dil. Factor:	2.47	**Date of Analysis:**	6/24/09 10:33 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.1	Not Detected
Freon 114	1.2	Not Detected	8.6	Not Detected
Chloromethane	4.9	Not Detected	10	Not Detected
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
1,3-Butadiene	1.2	Not Detected	2.7	Not Detected
Bromomethane	1.2	Not Detected	4.8	Not Detected
Chloroethane	1.2	Not Detected	3.2	Not Detected
Freon 11	1.2	Not Detected	6.9	Not Detected
Ethanol	4.9	Not Detected	9.3	Not Detected
Freon 113	1.2	Not Detected	9.5	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Acetone	4.9	12	12	30
2-Propanol	4.9	Not Detected	12	Not Detected
Carbon Disulfide	1.2	Not Detected	3.8	Not Detected
3-Chloropropene	4.9	Not Detected	15	Not Detected
Methylene Chloride	1.2	Not Detected	4.3	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.4	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Hexane	1.2	Not Detected	4.4	Not Detected
1,1-Dichloroethane	1.2	Not Detected	5.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	3.4	3.6	10
cis-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.6	Not Detected
Chloroform	1.2	Not Detected	6.0	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Cyclohexane	1.2	Not Detected	4.2	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.8	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.8	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
1,2-Dichloroethane	1.2	Not Detected	5.0	Not Detected
Heptane	1.2	Not Detected	5.1	Not Detected
Trichloroethene	1.2	Not Detected	6.6	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.7	Not Detected
1,4-Dioxane	4.9	Not Detected	18	Not Detected
Bromodichloromethane	1.2	Not Detected	8.3	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.6	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	5.0	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
trans-1,3-Dichloropropene	1.2	Not Detected	5.6	Not Detected

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG129SG

Lab ID#: 0906342B-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**r062421**	**Date of Collection: 6/12/09 2:40:00 PM**	
Dil. Factor:	**2.47**	**Date of Analysis: 6/24/09 10:33 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Tetrachloroethene	1.2	83	8.4	560
2-Hexanone	4.9	Not Detected	20	Not Detected
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.5	Not Detected
Chlorobenzene	1.2	Not Detected	5.7	Not Detected
Ethyl Benzene	1.2	Not Detected	5.4	Not Detected
m,p-Xylene	1.2	Not Detected	5.4	Not Detected
o-Xylene	1.2	Not Detected	5.4	Not Detected
Styrene	1.2	Not Detected	5.3	Not Detected
Bromoform	1.2	Not Detected	13	Not Detected
Cumene	1.2	Not Detected	6.1	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.5	Not Detected
Propylbenzene	1.2	Not Detected	6.1	Not Detected
4-Ethyltoluene	1.2	Not Detected	6.1	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	6.1	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	6.1	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.4	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
1,2,4-Trichlorobenzene	4.9	Not Detected	37	Not Detected
Hexachlorobutadiene	4.9	Not Detected	53	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	96	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG130SG

Lab ID#: 0906342B-10A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	r062422	**Date of Collection:**	6/12/09 3:25:00 PM
Dil. Factor:	2.47	**Date of Analysis:**	6/24/09 11:19 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.1	Not Detected
Freon 114	1.2	Not Detected	8.6	Not Detected
Chloromethane	4.9	Not Detected	10	Not Detected
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
1,3-Butadiene	1.2	Not Detected	2.7	Not Detected
Bromomethane	1.2	Not Detected	4.8	Not Detected
Chloroethane	1.2	Not Detected	3.2	Not Detected
Freon 11	1.2	Not Detected	6.9	Not Detected
Ethanol	4.9	Not Detected	9.3	Not Detected
Freon 113	1.2	Not Detected	9.5	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Acetone	4.9	9.0	12	21
2-Propanol	4.9	Not Detected	12	Not Detected
Carbon Disulfide	1.2	Not Detected	3.8	Not Detected
3-Chloropropene	4.9	Not Detected	15	Not Detected
Methylene Chloride	1.2	Not Detected	4.3	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.4	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Hexane	1.2	Not Detected	4.4	Not Detected
1,1-Dichloroethane	1.2	Not Detected	5.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	2.4	3.6	6.9
cis-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.6	Not Detected
Chloroform	1.2	Not Detected	6.0	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Cyclohexane	1.2	Not Detected	4.2	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.8	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.8	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
1,2-Dichloroethane	1.2	Not Detected	5.0	Not Detected
Heptane	1.2	Not Detected	5.1	Not Detected
Trichloroethene	1.2	Not Detected	6.6	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.7	Not Detected
1,4-Dioxane	4.9	Not Detected	18	Not Detected
Bromodichloromethane	1.2	Not Detected	8.3	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.6	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	5.0	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
trans-1,3-Dichloropropene	1.2	Not Detected	5.6	Not Detected

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG130SG

Lab ID#: 0906342B-10A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**r062422**	**Date of Collection: 6/12/09 3:25:00 PM**	
Dil. Factor:	**2.47**	**Date of Analysis: 6/24/09 11:19 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Tetrachloroethene	1.2	44	8.4	300
2-Hexanone	4.9	Not Detected	20	Not Detected
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.5	Not Detected
Chlorobenzene	1.2	Not Detected	5.7	Not Detected
Ethyl Benzene	1.2	Not Detected	5.4	Not Detected
m,p-Xylene	1.2	Not Detected	5.4	Not Detected
o-Xylene	1.2	Not Detected	5.4	Not Detected
Styrene	1.2	Not Detected	5.3	Not Detected
Bromoform	1.2	Not Detected	13	Not Detected
Cumene	1.2	Not Detected	6.1	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.5	Not Detected
Propylbenzene	1.2	Not Detected	6.1	Not Detected
4-Ethyltoluene	1.2	Not Detected	6.1	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	6.1	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	6.1	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.4	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
1,2,4-Trichlorobenzene	4.9	Not Detected	37	Not Detected
Hexachlorobutadiene	4.9	Not Detected	53	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	95	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG131SG

Lab ID#: 0906342B-11A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	r062423	**Date of Collection:**	6/12/09 3:30:00 PM
Dil. Factor:	2.42	**Date of Analysis:**	6/25/09 12:03 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.0	Not Detected
Freon 114	1.2	Not Detected	8.4	Not Detected
Chloromethane	4.8	Not Detected	10	Not Detected
Vinyl Chloride	1.2	Not Detected	3.1	Not Detected
1,3-Butadiene	1.2	Not Detected	2.7	Not Detected
Bromomethane	1.2	Not Detected	4.7	Not Detected
Chloroethane	1.2	Not Detected	3.2	Not Detected
Freon 11	1.2	Not Detected	6.8	Not Detected
Ethanol	4.8	Not Detected	9.1	Not Detected
Freon 113	1.2	Not Detected	9.3	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Acetone	4.8	Not Detected	11	Not Detected
2-Propanol	4.8	Not Detected	12	Not Detected
Carbon Disulfide	1.2	Not Detected	3.8	Not Detected
3-Chloropropene	4.8	Not Detected	15	Not Detected
Methylene Chloride	1.2	Not Detected	4.2	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.4	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Hexane	1.2	Not Detected	4.3	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	Not Detected	3.6	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.6	Not Detected
Chloroform	1.2	Not Detected	5.9	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Cyclohexane	1.2	Not Detected	4.2	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.6	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.6	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.9	Not Detected
Heptane	1.2	Not Detected	5.0	Not Detected
Trichloroethene	1.2	Not Detected	6.5	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.6	Not Detected
1,4-Dioxane	4.8	Not Detected	17	Not Detected
Bromodichloromethane	1.2	Not Detected	8.1	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.5	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	5.0	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
trans-1,3-Dichloropropene	1.2	Not Detected	5.5	Not Detected

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG131SG

Lab ID#: 0906342B-11A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	r062423	**Date of Collection:**	6/12/09 3:30:00 PM
Dil. Factor:	2.42	**Date of Analysis:**	6/25/09 12:03 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Tetrachloroethene	1.2	45	8.2	300
2-Hexanone	4.8	Not Detected	20	Not Detected
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.3	Not Detected
Chlorobenzene	1.2	Not Detected	5.6	Not Detected
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
m,p-Xylene	1.2	Not Detected	5.2	Not Detected
o-Xylene	1.2	Not Detected	5.2	Not Detected
Styrene	1.2	Not Detected	5.2	Not Detected
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	5.9	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.3	Not Detected
Propylbenzene	1.2	Not Detected	5.9	Not Detected
4-Ethyltoluene	1.2	Not Detected	5.9	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	5.9	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	5.9	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.3	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
1,2,4-Trichlorobenzene	4.8	Not Detected	36	Not Detected
Hexachlorobutadiene	4.8	Not Detected	52	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	93	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG132SG

Lab ID#: 0906342B-12A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**r062424**	**Date of Collection:**	**6/12/09 3:55:00 PM**
Dil. Factor:	**24.2**	**Date of Analysis:**	**6/25/09 12:47 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	12	Not Detected	60	Not Detected
Freon 114	12	Not Detected	84	Not Detected
Chloromethane	48	Not Detected	100	Not Detected
Vinyl Chloride	12	Not Detected	31	Not Detected
1,3-Butadiene	12	Not Detected	27	Not Detected
Bromomethane	12	Not Detected	47	Not Detected
Chloroethane	12	Not Detected	32	Not Detected
Freon 11	12	Not Detected	68	Not Detected
Ethanol	48	Not Detected	91	Not Detected
Freon 113	12	Not Detected	93	Not Detected
1,1-Dichloroethene	12	Not Detected	48	Not Detected
Acetone	48	Not Detected	110	Not Detected
2-Propanol	48	Not Detected	120	Not Detected
Carbon Disulfide	12	Not Detected	38	Not Detected
3-Chloropropene	48	Not Detected	150	Not Detected
Methylene Chloride	12	Not Detected	42	Not Detected
Methyl tert-butyl ether	12	Not Detected	44	Not Detected
trans-1,2-Dichloroethene	12	Not Detected	48	Not Detected
Hexane	12	Not Detected	43	Not Detected
1,1-Dichloroethane	12	Not Detected	49	Not Detected
2-Butanone (Methyl Ethyl Ketone)	12	Not Detected	36	Not Detected
cis-1,2-Dichloroethene	12	Not Detected	48	Not Detected
Tetrahydrofuran	12	Not Detected	36	Not Detected
Chloroform	12	Not Detected	59	Not Detected
1,1,1-Trichloroethane	12	Not Detected	66	Not Detected
Cyclohexane	12	Not Detected	42	Not Detected
Carbon Tetrachloride	12	Not Detected	76	Not Detected
2,2,4-Trimethylpentane	12	Not Detected	56	Not Detected
Benzene	12	Not Detected	39	Not Detected
1,2-Dichloroethane	12	Not Detected	49	Not Detected
Heptane	12	Not Detected	50	Not Detected
Trichloroethene	12	Not Detected	65	Not Detected
1,2-Dichloropropane	12	Not Detected	56	Not Detected
1,4-Dioxane	48	Not Detected	170	Not Detected
Bromodichloromethane	12	Not Detected	81	Not Detected
cis-1,3-Dichloropropene	12	Not Detected	55	Not Detected
4-Methyl-2-pentanone	12	Not Detected	50	Not Detected
Toluene	12	Not Detected	46	Not Detected
trans-1,3-Dichloropropene	12	Not Detected	55	Not Detected

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 094AG132SG

Lab ID#: 0906342B-12A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**r062424**	**Date of Collection: 6/12/09 3:55:00 PM**	
Dil. Factor:	**24.2**	**Date of Analysis: 6/25/09 12:47 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	12	Not Detected	66	Not Detected
Tetrachloroethene	12	2000	82	13000
2-Hexanone	48	Not Detected	200	Not Detected
Dibromochloromethane	12	Not Detected	100	Not Detected
1,2-Dibromoethane (EDB)	12	Not Detected	93	Not Detected
Chlorobenzene	12	Not Detected	56	Not Detected
Ethyl Benzene	12	Not Detected	52	Not Detected
m,p-Xylene	12	Not Detected	52	Not Detected
o-Xylene	12	Not Detected	52	Not Detected
Styrene	12	Not Detected	52	Not Detected
Bromoform	12	Not Detected	120	Not Detected
Cumene	12	Not Detected	59	Not Detected
1,1,2,2-Tetrachloroethane	12	Not Detected	83	Not Detected
Propylbenzene	12	Not Detected	59	Not Detected
4-Ethyltoluene	12	Not Detected	59	Not Detected
1,3,5-Trimethylbenzene	12	Not Detected	59	Not Detected
1,2,4-Trimethylbenzene	12	Not Detected	59	Not Detected
1,3-Dichlorobenzene	12	Not Detected	73	Not Detected
1,4-Dichlorobenzene	12	Not Detected	73	Not Detected
alpha-Chlorotoluene	12	Not Detected	63	Not Detected
1,2-Dichlorobenzene	12	Not Detected	73	Not Detected
1,2,4-Trichlorobenzene	48	Not Detected	360	Not Detected
Hexachlorobutadiene	48	Not Detected	520	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130
1,2-Dichloroethane-d4	101	70-130
4-Bromofluorobenzene	92	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 0906342B-13A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**r062419**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/24/09 08:43 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 0906342B-13A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**r062419**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/24/09 08:43 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	97	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: CCV

Lab ID#: 0906342B-14A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**r062417**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/24/09 06:44 PM**	

Compound	%Recovery
Freon 12	112
Freon 114	100
Chloromethane	99
Vinyl Chloride	91
1,3-Butadiene	105
Bromomethane	104
Chloroethane	83
Freon 11	108
Ethanol	91
Freon 113	96
1,1-Dichloroethene	95
Acetone	88
2-Propanol	96
Carbon Disulfide	83
3-Chloropropene	84
Methylene Chloride	96
Methyl tert-butyl ether	97
trans-1,2-Dichloroethene	88
Hexane	88
1,1-Dichloroethane	91
2-Butanone (Methyl Ethyl Ketone)	96
cis-1,2-Dichloroethene	95
Tetrahydrofuran	98
Chloroform	104
1,1,1-Trichloroethane	104
Cyclohexane	88
Carbon Tetrachloride	107
2,2,4-Trimethylpentane	94
Benzene	91
1,2-Dichloroethane	103
Heptane	89
Trichloroethene	111
1,2-Dichloropropane	90
1,4-Dioxane	90
Bromodichloromethane	102
cis-1,3-Dichloropropene	93
4-Methyl-2-pentanone	90
Toluene	95
trans-1,3-Dichloropropene	89

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: CCV

Lab ID#: 0906342B-14A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	r062417	**Date of Collection:**	NA
Dil. Factor:	1.00	**Date of Analysis:**	6/24/09 06:44 PM

Compound	%Recovery
1,1,2-Trichloroethane	87
Tetrachloroethene	94
2-Hexanone	84
Dibromochloromethane	99
1,2-Dibromoethane (EDB)	99
Chlorobenzene	94
Ethyl Benzene	92
m,p-Xylene	95
o-Xylene	94
Styrene	99
Bromoform	111
Cumene	99
1,1,2,2-Tetrachloroethane	80
Propylbenzene	99
4-Ethyltoluene	100
1,3,5-Trimethylbenzene	93
1,2,4-Trimethylbenzene	96
1,3-Dichlorobenzene	97
1,4-Dichlorobenzene	96
alpha-Chlorotoluene	92
1,2-Dichlorobenzene	94
1,2,4-Trichlorobenzene	88
Hexachlorobutadiene	86

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	111	70-130
4-Bromofluorobenzene	105	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 0906342B-15A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**r062418**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/24/09 07:17 PM**	

Compound	%Recovery
Freon 12	97
Freon 114	88
Chloromethane	88
Vinyl Chloride	76
1,3-Butadiene	83
Bromomethane	96
Chloroethane	68 Q
Freon 11	94
Ethanol	62
Freon 113	94
1,1-Dichloroethene	92
Acetone	81
2-Propanol	86
Carbon Disulfide	76
3-Chloropropene	77
Methylene Chloride	93
Methyl tert-butyl ether	87
trans-1,2-Dichloroethene	78
Hexane	79
1,1-Dichloroethane	83
2-Butanone (Methyl Ethyl Ketone)	84
cis-1,2-Dichloroethene	92
Tetrahydrofuran	86
Chloroform	93
1,1,1-Trichloroethane	95
Cyclohexane	80
Carbon Tetrachloride	96
2,2,4-Trimethylpentane	85
Benzene	81
1,2-Dichloroethane	92
Heptane	81
Trichloroethene	79
1,2-Dichloropropane	79
1,4-Dioxane	78
Bromodichloromethane	90
cis-1,3-Dichloropropene	80
4-Methyl-2-pentanone	80
Toluene	88
trans-1,3-Dichloropropene	78

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 0906342B-15A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**r062418**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/24/09 07:17 PM**	

Compound	%Recovery
1,1,2-Trichloroethane	78
Tetrachloroethene	83
2-Hexanone	71
Dibromochloromethane	88
1,2-Dibromoethane (EDB)	85
Chlorobenzene	83
Ethyl Benzene	82
m,p-Xylene	83
o-Xylene	83
Styrene	87
Bromoform	98
Cumene	90
1,1,2,2-Tetrachloroethane	91
Propylbenzene	89
4-Ethyltoluene	88
1,3,5-Trimethylbenzene	83
1,2,4-Trimethylbenzene	85
1,3-Dichlorobenzene	85
1,4-Dichlorobenzene	84
alpha-Chlorotoluene	84
1,2-Dichlorobenzene	82
1,2,4-Trichlorobenzene	74
Hexachlorobutadiene	74

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	109	70-130
4-Bromofluorobenzene	106	70-130

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

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Project Info:
P.O. #:
Project #: 14-139
Project Name: 4th + Cambell

Turn Around Time:
☒ Normal
☐ Rush
_____ specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum: Initial	Final	Receipt	Final (psig)
01A	094AG121AA	14012	6/2/09	1305	TO-15 LL	29.5	25		
02A	094AG122AA	34352		1310	TO-15 LL	29.5	25		
03A	094AG123CS	5622		1315	TO-15 LL	29.5	5		
04A	094AG124CS	31441		1315	TO-15 LL	29.5	4.5		
05A	094AG125IA	14885		1320	TO-15 LL	29.5	10		
06A	094AG126IA	9579		1330	TO-15LL	29.5	5.5		
07A	094AG127IA	5755		1400	TO-15LL	29.5	6		
	094AG128SG	30835		1400	TO-15	29	6		
	094AG129SG	36529		1440	TO-15	29.5	6		
	094AG130SG	36341	↓	1525	TO-15	29	7		

Relinquished by: (signature) Ben Mortich Date/Time 6/15/09 0830
Received by: (signature) Monica Gregson ATL Date/Time 6/16/09 905

Relinquished by: (signature) Date/Time
Received by: (signature) Date/Time

Relinquished by: (signature) Date/Time
Received by: (signature) Date/Time

Notes:
Possible moisture issues with samples 094AG121AA + 094AG122AA

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fed Ex		NA	Good	Yes / No / (None)	0906342

Form 1299 rev.11

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager Ron Martich
Collected by: (Print and Sign) B. Martich
Company CASIS Environmental Email martich@casiservice.com
Address 525 W 8th City Anchorage State AK Zip 99501
Phone 907-258-4880 Fax

Project Info:
P.O. #
Project # 14-139
Project Name 4th & Gambell

Turn Around Time:
☐ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Rec'd pt	Final (psig)
	~~D94AG~~ D94AG131SG	34654	6/12/09	1530	TO-15	29	4		
	D94AG132SG	25289	6/12/09	1535	TO-15	28	5		
	~~D94AG133TB~~	~~22499~~	—	—				B. Martich	
13A	D94AG133TB	22499	—	—	TO-15 LL				

Relinquished by: (signature) B. Martich Date/Time 6/15/09 0830
Received by: (signature) Monica Groppen ATL Date/Time 6/16/09 909

Relinquished by: (signature) Date/Time
Received by: (signature) Date/Time

Relinquished by: (signature) Date/Time
Received by: (signature) Date/Time

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fed Ex		NA	Good	Yes No (None)	0906342

Form [illegible] rev 12

APPENDIX E

ADEC Data Review Checklists

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Laboratory Data Review Checklist

Completed by:	Marty Hannah
Title:	Environmental Scientist
Date:	March 31, 2009
CS Report Name:	Vapor Intrusion Assessment at 4th and Gambell
Report Date:	
Consultant Firm:	OASIS Environmental Inc.
Laboratory Name:	Air Toxics LTD
Laboratory Report Number:	090322A
ADEC File Number:	
ADEC RecKey Number:	

1. Laboratory

   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

   ☐ Yes ☐ No Comments:

   Air Toxics does not appear on the ADEC CS approved laboratory list. Air Toxics is NELAP certified.

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

   ☐ Yes ☐ No Comments:

   Not applicable

2. Chain of Custody (COC)

   a. COC information completed, signed, and dated (including released/received by)?

   ☑ Yes ☐ No Comments:

   b. Correct analyses requested?

   ☑ Yes ☐ No Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?

☐ Yes ☐ No Comments:

All samples were air samples. The samples were shipped and received at ambient temperature.

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

☒ Yes ☐ No Comments:

Samples were shipped under slight vacuum as prescribed.

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

☒ Yes ☐ No Comments:

All samples were received in good condition.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

☐ Yes ☐ No Comments:

Samples had slightly lower vacuum pressures upon arrival, likely due to the difference in temperature from the site and the lab.

e. Data quality or usability affected? Explain.

Comments:

All sample results are usable for project purposes.

4. Case Narrative

a. Present and understandable?

☒ Yes ☐ No Comments:

b. Discrepancies, errors or QC failures identified by the lab?

☒ Yes ☐ No Comments:

The trip blank had reportable concentrations of several target analytes.

c. Were all corrective actions documented?

☐ Yes ☐ No Comments:

No corrective actions were required.

d. What is the effect on data quality/usability according to the case narrative?

Comments:

Sample results are usable for project purposes. The trip blank results affected sample results. Refer to the QAR for further discussion.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

☒ Yes ☐ No Comments:

b. All applicable holding times met?

☒ Yes ☐ No Comments:

c. All soils reported on a dry weight basis?

☐ Yes ☐ No Comments:

All samples were air samples.

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

☒ Yes ☐ No Comments:

e. Data quality or usability affected?

Comments:

Data quality objectives were met for timely analyses and reporting levels.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

☒ Yes ☐ No Comments:

ii. All method blank results less than PQL?

☒ Yes ☐ No Comments:

iii. If above PQL, what samples are affected?

Comments:

Not applicable

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☐ Yes ☐ No Comments:

Not applicable

v. Data quality or usability affected? Explain.

Comments:

Data quality objectives were met for method blanks.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

☑ Yes ☐ No Comments:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

☐ Yes ☐ No Comments:

Not applicable

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

☑ Yes ☐ No Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

☑ Yes ☐ No Comments:

The laboratory reported a single LCS and a single CCV, both met accuracy limits.

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

Not applicable

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☐ Yes ☐ No Comments:

Not applicable

vii. Data quality or usability affected? (Use comment box to explain)
Comments:

Data quality objectives were met for laboratory QC accuracy and precision.

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?

☒ Yes ☐ No Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

☒ Yes ☐ No Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

☐ Yes ☐ No Comments:

Not applicable

iv. Data quality or usability affected? (Use the comment box to explain.)
Comments:

Data quality objectives were met for surrogate recoveries.

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (if not, enter explanation below.)

☒ Yes ☐ No Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

☐ Yes ☐ No Comments:

All samples were shipped in the same box. All samples were in summa canisters including the trip blank.

iii. All results less than PQL?

The trip blank had reportable concentrations of chloromethane, ethanol, acetone, 2-propanol, methylene chloride, hexane, 2-butanone, cyclohexane, heptanes, toluene, ethylbenzene, and xylenes.

☐ Yes ☒ No Comments:

iv. If above PQL, what samples are affected?

Comments:

Refer to tables 2 thru 5 for a listing of affected samples. Affected results are B flagged. Over half of the submitted samples were affected.

v. Data quality or usability affected? Explain.

Comments:

Data quality objectives were not met for trip blanks.

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

☒ Yes ☐ No Comments:

ii. Submitted blind to lab?

☒ Yes ☐ No Comments:

iii. Precision – All relative percent differences (RPD) less than specified DQOs? (Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1-R_2)}{((R_1+R_2)/2)} \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

☒ Yes ☐ No Comments:

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

Data quality objectives were met for field duplicates.

f. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below.)

☐ Yes ☐ No ☒ Not Applicable

i. All results less than PQL?

☐ Yes ☐ No Comments:

Not applicable

ii. If above PQL, what samples are affected?

Comments:

Not applicable

iii. Data quality or usability affected? Explain.

Comments:

Not applicable

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

☐ Yes ☐ No Comments:

Not applicable

Laboratory Data Review Checklist

Completed by:	Marty Hannah
Title:	Environmental Scientist
Date:	March 31, 2009
CS Report Name:	Vapor Intrusion Assessment at 4th and Gambell
Report Date:	
Consultant Firm:	OASIS Environmental Inc.
Laboratory Name:	Air Toxics LTD
Laboratory Report Number:	0903220B
ADEC File Number:	
ADEC RecKey Number:	

1. Laboratory

   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

   ☐ Yes ☐ No Comments:

   Air Toxics is not on the ADEC CS approved laboratory list. Air Toxics is NELAP certified.

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

   ☐ Yes ☐ No Comments:

   Not applicable

2. Chain of Custody (COC)

   a. COC information completed, signed, and dated (including released/received by)?

   ☑ Yes ☐ No Comments:

   b. Correct analyses requested?

   ☑ Yes ☐ No Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?

☐ Yes ☐ No Comments:

All samples were air samples that were shipped and received at ambient temperatures.

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

☑ Yes ☐ No Comments:

Summa canisters were shipped under slight vacuum.

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

☑ Yes ☐ No Comments:

All samples were received in good condition.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

☑ Yes ☐ No Comments:

The summa canister vacuum pressures differed between what field personnel recorded and what the lab recorded upon receipt. Differences are attributed to changes in vacuum pressure with temperature and the field personnel used an uncalibrated vacuum gauge, as reported on the CoC.

e. Data quality or usability affected? Explain.

Comments:

Data quality was not affected. The laboratory used the final vacuum pressure to calculate the reported concentrations.

4. Case Narrative

a. Present and understandable?

☑ Yes ☐ No Comments:

b. Discrepancies, errors or QC failures identified by the lab?

☐ Yes ☐ No Comments:

The trip blank had reportable concentrations above the PQL for several compounds. The same compounds were reported in sample results at similar concentrations.

c. Were all corrective actions documented?

☐ Yes ☐ No Comments:

No corrective actions were required.

d. What is the effect on data quality/usability according to the case narrative?

Comments:

Sample results are usable for project purposes.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

☒ Yes ☐ No Comments:

b. All applicable holding times met?

☒ Yes ☐ No Comments:

c. All soils reported on a dry weight basis?

☐ Yes ☐ No Comments:

All samples were air samples.

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

☒ Yes ☐ No Comments:

e. Data quality or usability affected?

Comments:

Data quality objectives were met for timely analyses and reporting levels.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

☒ Yes ☐ No Comments:

ii. All method blank results less than PQL?

☒ Yes ☐ No Comments:

iii. If above PQL, what samples are affected?

Comments:

Not applicable

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☐ Yes ☐ No Comments:

Not applicable

v. Data quality or usability affected? Explain.

Comments:

Data quality objectives were met for method blanks.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

☑ Yes ☐ No Comments:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

☑ Yes ☐ No Comments:

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

☐ Yes ☑ No Comments:

The LCS had high recoveries for bromomethane and the LCSD had low recoveries for MTBE. Neither analyte was detected in any samples.

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

☐ Yes ☑ No Comments:

The LCS/LCSD did not meet RPD limits for bromomethane or MTBE.

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

Bromomethane and MTBE were not detected in any samples.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☐ Yes ☐ No Comments:

No data flags were assigned based on LCS/LCSD recoveries.

vii. Data quality or usability affected? (Use comment box to explain)

Comments:

Data quality objectives were met for laboratory QC accuracy and precision with noted exceptions.

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?

☒ Yes ☐ No Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

☒ Yes ☐ No Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

☐ Yes ☐ No Comments:

Not applicable

iv. Data quality or usability affected? (Use the comment box to explain.)

Comments:

Data quality objectives were met for surrogate recoveries.

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (if not, enter explanation below.)

☐ Yes ☐ No Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

☐ Yes ☐ No Comments:

iii. All results less than PQL?

The trip blank had reportable concentrations of chloromethane, ethanol, acetone, 2-propanol, methylene chloride, hexane, 2-butanone (MEK), cyclohexane, benzene, heptanes, toluene, ethylbenzene, m, p, and o-xylene. Positive sample results that were also reported in the trip blank at less than ten times the concentratrion reported in the trip blank are flagged B and are considered estimates.

☐ Yes ☒ No Comments:

iv. If above PQL, what samples are affected?

Comments:

Affected samples are flagged B on Tables 2-5 of the report.

v. Data quality or usability affected? Explain.

Comments:

Data quality was affected by positive results in the trip blank.

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

☒ Yes ☐ No Comments:

ii. Submitted blind to lab?

☒ Yes ☐ No Comments:

iii. Precision – All relative percent differences (RPD) less than specified DQOs? (Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1-R_2)}{((R_1+R_2)/2)} \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

☒ Yes ☐ No Comments:

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

Data quality objectives were met for the trip blank.

f. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below.)

☐ Yes ☐ No ☒ Not Applicable

i. All results less than PQL?

☐ Yes ☐ No Comments:

Not applicable

ii. If above PQL, what samples are affected?

Comments:

Not applicable

iii. Data quality or usability affected? Explain.

Comments:

Not applicable

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

☐ Yes ☐ No Comments:

Not applicable

Laboratory Data Review Checklist

Completed by:	B Martich
Title:	Envt Scientist
Date:	7/8/09
CS Report Name:	4th and Gambell Vapor Intrusion Assessment
Report Date:	6/25/09
Consultant Firm:	OAISS Environmental
Laboratory Name:	Air Toxics
Laboratory Report Number:	0906342A&B
ADEC File Number:	2100.38.434
ADEC RecKey Number:	4084

1. Laboratory

   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

   ☑ Yes ☐ No Comments:

   NELAP Air Lab

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

   ☐ Yes ☐ No Comments:

   NA

2. Chain of Custody (COC)

   a. COC information completed, signed, and dated (including released/received by)?

   ☑ Yes ☐ No Comments:

   b. Correct analyses requested?

   ☑ Yes ☐ No Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?

☐ Yes ☐ No Comments:

NA

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

☐ Yes ☐ No Comments:

NA

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

☐ Yes ☐ No Comments:

Samples 094AG121AA and 094AG122AA had low sample volumes which resulted in high reporting limits.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

☐ Yes ☐ No Comments:

NA

e. Data quality or usability affected? Explain.

Comments:

Low sample volumes in samples above may have caused some low-level ambient compounds to be missed, but given the concentrations of PCE at the site any potential impact is negligible

4. Case Narrative

a. Present and understandable?

☑ Yes ☐ No Comments:

b. Discrepancies, errors or QC failures identified by the lab?

☑ Yes ☐ No Comments:

c. Were all corrective actions documented?

☐ Yes ☐ No Comments:

NA

d. What is the effect on data quality/usability according to the case narrative?

Comments:

NA

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

☒ Yes ☐ No Comments:

b. All applicable holding times met?

☒ Yes ☐ No Comments:

c. All soils reported on a dry weight basis?

☐ Yes ☐ No Comments:

NA

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

☒ Yes ☐ No Comments:

e. Data quality or usability affected?

Comments:

NA

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

☒ Yes ☐ No Comments:

ii. All method blank results less than PQL?

☒ Yes ☐ No Comments:

iii. If above PQL, what samples are affected?

Comments:

NA

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☐ Yes ☐ No Comments:

NA

v. Data quality or usability affected? Explain.

Comments:

NA

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

☒ Yes ☐ No Comments:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

☒ Yes ☐ No Comments:

NA

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

☐ Yes ☒ No Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

☒ Yes ☐ No Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

%r for chloroethane outside of control, but compound is not a COC nor was it detected at site

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☐ Yes ☐ No Comments:

NA

vii. Data quality or usability affected? (Use comment box to explain)
Comments:

No effect

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?

☑ Yes ☐ No Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

☑ Yes ☐ No Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

☐ Yes ☐ No Comments:

NA

iv. Data quality or usability affected? (Use the comment box to explain.)
Comments:

NA

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (if not, enter explanation below.)

☑ Yes ☐ No Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

☐ Yes ☐ No Comments:

iii. All results less than PQL?

☑ Yes ☐ No Comments:

iv. If above PQL, what samples are affected?

Comments:

NA

v. Data quality or usability affected? Explain.

Comments:

NA

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

☒ Yes ☐ No Comments:

ii. Submitted blind to lab?

☒ Yes ☐ No Comments:

iii. Precision – All relative percent differences (RPD) less than specified DQOs? (Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1-R_2)}{((R_1+R_2)/2)} \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

☒ Yes ☐ No Comments:

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

NA

f. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below.)

☐ Yes ☐ No ☒ Not Applicable

i. All results less than PQL?

☐ Yes ☐ No Comments:

ii. If above PQL, what samples are affected?

Comments:

iii. Data quality or usability affected? Explain.

Comments:

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

☐ Yes ☐ No Comments:

NA